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OF THE
INDUSTRIAL COMMISSION

ON THE

DISTRIBUTION OF FARM PRODUCTS.

VOLUME VI
OF THE COMMISSION'S REPORTS.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1901.

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E. DANA DURAND, Secretary.

[Extract from act of Congress of June 18, 1898, defining the duties of the Industrial Commission and showing the scope of its inquiries.]

SEC. 2. That it shall be the duty of this commission to investigate questions pertaining to immigration, to labor, to agriculture, to manufacturing, and to business, and to report to Congress and to suggest such legislation as it may deem best upon these subjects.

SEC. 3. That it shall furnish such information and suggest such laws as may be made a basis for uniform legislation by the various States of the Union, in order to harmonize conflicting interests and to be equitable to the laborer, the employer, the producer, and the consumer.

INDUSTRIAL COMMISSION,
Washington, D. C., January 15, 1901.

The Industrial Commission herewith presents to Congress a report on the distribution of farm products. The object in presenting this report at this time, in advance of a final report on conditions of agriculture and suggested remedial legislation relating thereto, is to furnish Congress and the public with concrete data, assembled from a hitherto but partially exploited field of investigation.

It is not claimed that the conclusions set forth in this report are free from errors of judgment, but the statistical facts presented are from original and official sources and form a basis for intelligent analysis, useful alike to the legislator, the farmer, and the business man.

Respectfully,

JAMES H. KYLE,
Chairman.

The SENATE AND HOUSE OF REPRESENTATIVES.

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REPORT

ON THE

DISTRIBUTION OF FARM PRODUCTS.

Prepared under the direction of the Industrial Commission by JOHN FRANKLIN CROWELL, Ph. D., expert agent.

To the Industrial Commission:

The report submitted herewith covers the commercial disposition of the leading kinds of farm products—cereals, cotton, live stock, dairy products, tobacco, wool, and vegetables. The object has been twofold; first, to describe the distributive system by which these products are handled from producers to consumers; and, secondly, to determine as far as practicable the share of the consumers' price which goes respectively to producers and distributers, at any given time and place, in marketing any particular species of farm product.

In order to ascertain these facts it has been necessary to select representative places of production and consumption, and then to follow a standard grade of product from the one to the other through all the essential stages of its commercial disposition. With all of these stages some specific rate of charge is connected; so that, by taking a definite unit of product, whose charges of various kinds are known or obtainable, for particular localities, it has been possible to arrive at a definite statement of the expenses of distribution, as well as to describe the features of the market which influence the prices paid by consumers or received by producers. In the effort to get the data to show what proportion of the price paid by consumers goes to distributive expenses and what proportion to the producer, special agents have been employed in selected places.

The conclusions to which the inquiry has led may be summarized in the briefest form for those who do not have time to weigh the facts and analyze the conditions within the scope of this large subject.

SPECULATIVE DISTRIBUTION LOCALIZES RISKS.

(*Parts First and Fourth.*)

The first fact to be recognized in the survey of the American system of distributing farm products is that it is essentially a speculative system from beginning to end—speculative in the sense that after the products pass out of the producers' hands and until they pass into the consumers' control there is not a moment nor a stage in the distributive movement during which the one who has legal control over the property in question does not run the risk of a rise or fall in the value of the property. With the growth in the volume and scope of production and in the variety and the complexity of operations involved in the marketing of the products of the farm there have grown up gradually classes of men and commercial methods peculiar to the purposes and conditions which call them into existence; but in the vast army of men and in the infinite variety of methods there is not a single responsible agency engaged which is not in some way required to assume liability for loss or gain from changes in value occurring in the course of distribution from the producer to the consumer. In brief, the risks of distribution are shifted by both producers and consumers upon the distinct class of speculators known as distributers, who make it a business to take such risks and to divide them up among themselves on the basis of net profit on capital and cost of business capacity. This, in the final analysis, is the underlying fact in the system of distributing farm products in the United States.

REDUCTION OF RISKS REDUCES RATES.

It may be true of a distributive system such as this that at any one time there are altogether too many men and too much machinery in it to operate it economically. The higher profits of speculative investment attract people in prosperous times, and the lower returns on productive enterprise in dull times tempt people with capital or capacity to become distributers. Both failures and successes elsewhere help to fill the ranks of the commercial distributer. This goes on until capital becomes abundant and competition among traders becomes too keen for any but the most capable organizers of commercial operations, who, on account of their superior efficiency, can command abundant capital to make themselves masters in some part of the distributive process. Then old methods make way for new men. The volume of trade under a single control is greatly increased, the size of the transactions is enormously enlarged, but the rate of profit on each unit of farm product is far less than under the older and more expensive system of many commercial agents. The facts examined show that in the course of the past 25 years there has been a constant tendency toward a reduction in the difference between what the producer receives and what the consumer pays. In other words, the existing commercial system of distribution of farm products inevitably tends, under equitable laws and responsible uses of capital, to cost society a decreasing proportion of the value of the farm products. With the reduction of risks of trade the reduction of rates is inevitable. Fifteen years ago the ranks of commerce in farm products were congested. Since then the rate of commission has been so much reduced that the old-style commission business has been doomed to disappear in the cotton and the grain trades, the hay trade, and, to a considerable extent, in many other kinds of distribution.

ELIMINATION OF THE MORE EXPENSIVE MIDDLEMAN.

(*Parts Second-Ninth, inclusive.*)

In the distribution of live stock, of cotton, grain, tobacco, and wool the main tendency is to eliminate the more expensive middleman. It is doubtful whether the Granger of 30 years ago recognizes how fully the ambitions and aims of that organization have been realized in bringing the consumer and the producer nearer together. The telegraph and mail bring to the cotton and grain producers the prices of the world's markets day by day. The shipper simply ascertains by what ways and means the transfer from producer to consumer can be effected most economically. To err is to eliminate himself. There is no important class of cotton or grain dealers that can interpose itself at any point or place in the distributive process of these products and exact compensation regardless of services rendered. If the compensation is greater than the service is worth, competition of capital will seek to supplant the favored agent or agency; if compensation is less than the services are worth, that in itself will be sufficient to drive out or keep out those employed therein. In almost every trading center and for almost every leading farm product handled largely, it has been necessary to lump charges in order to keep trading during the past ten years. An attempt to impose even a triflingly small excess of charges on cotton or grain at one distribution point will be taken advantage of by competing points. To such influences the Gulf movement of grain is to be attributed, the loss of live stock to Chicago through its terminal charges, and the active conditions of competition under which most of the tobacco and some wool is marketed. Distribution of our main crops proceeds, on the whole, by the lines of least outlay between producers and consumers.

DEFECTIVE DISTRIBUTION OF FRUITS AND VEGETABLES.

(*Part Fourteenth.*)

There are certain departments of distribution in which this competitive process does not get rid of the more expensive methods of distribution, or if it does eliminate them it does it far more slowly than in other distributive practices. Products whose dristribution involves the existence of a visible supply or reserve stock in market awaiting a rise or fall of price to move them, such as cotton, grain, tobacco, and wool, all exhibit a decided tendency to eliminate the more expensive middleman. On the other hand, products, such as fruits and vegetables, where no storable visible supply exists because of their perishable nature, have not shown any but a very slow tendency to get rid of the more expensive methods of distribution. There may be three reasons for this: First, the extraordinary risks of depreciation; secondly, insufficiency of capital characterizing such distribution; and, thirdly, the absence of anything like large-scale handling of these products—fruits and vegetables—with a view to the elimination of risks and the introduction of economies not apt to occur under the commission system of many dealers. Nothing but consolidation can economize costs of distribution. Owing to the absence of this factor the most unfavorably marketed farm products are fruits and vegetables.

The vegetable trade is much improved over former years by refrigerating transportation, but the losses are enormous to the producer, and his attitude toward commission men is one of distrust. There is no class of merchants against whom dishonesty is so constantly charged as against commission men, to whom farm produce of the class mentioned is sent. It is claimed by the shipping producer that the commission men sell to themselves when it is profitable and to others when it is unprofitable to buy, thus making profits and commissions in the former case and commissions in the latter case. At any rate the distributers and producers fail to cooperate and the consumer pays part of the cost of uneconomical methods. The probability is, however, that the entire business of selling on commission is antiquated and should have been abandoned long ago. In various kinds of trade in farm products it is beginning to disappear or has disappeared, much to the satisfaction of all concerned. Where it lingers it is due to the high integrity of particular representatives of the trade itself, or to the incapacity of producers to make better arrangements to sell their products. On the whole, however, with proper exceptions of commission men and commission markets that could be mentioned, the commission method of sales in the large cities is the most demoralizing feature in the entire range of distribution of farm products, as far as its effect upon the producer is concerned. Cooperative methods have not yet fully proved themselves available as substitute methods, though the Californian systems of marketing their crops of deciduous and citrus fruits is a successful development in the right direction. Any improvement whatever must be based either on an aggressive organization for producing interests or on a better organization of municipal distribution.

COMPETITIVE AND MONOPOLY GRAIN RATES.

(*Part Second.*)

In the matter of transportation there is no greater fallacy than that which assumes that grain rates all over the country have fallen anything like the rate on grain from Chicago to New York. Almost all reasoning on this subject takes the decline in the Chicago-New York rate to represent the general decline throughout the country. This is not the case, because the Chicago-New York rate is a competitive rate of the intensest kind. The rates to Chicago from the corn and wheat fields of the cereal section are apparently monopoly rates to a certain extent, as most local rates are in comparison with through rates. The extent to which this partial monopoly rate can be enforced is very much limited by the fact that the railroads from the great interior grain markets cut into what is called each other's territory so generally as to make the so-called monopoly rate a competitive rate between the farmer's shipping station and the central market. Nevertheless, rates from these stations to the central markets—like Chicago, Minneapolis, or Kansas City—have not by any means declined to the extent of reduction in rates from the central markets to the seaboard. The great gain in the past 15 years to the consumer has been by the elimination of numerous charges at these central markets by concentrating the trade, and to the producer by the competition of these central markets themselves whereby the price tends to be kept up to a higher level than otherwise. The fact that dealers or buyers of grain on a large scale have been able to get lower rates to the central market than small dealers or individual shippers is in itself no economic loss to the producer or consumer. It is a means to which railroads have resorted to get control of competitive traffic. It may be illegal in some respects, but it is none the less inevitable in the main, and more economical than the system it tends to displace.

BOYCOTT BY GRAIN DEALERS' ASSOCIATIONS.

(*Part Second.*)

One of the features of the grain trade deserving attention is the methods of local grain dealers' associations in boycotting the producers and dealers alike under the charge of what they are pleased to call "irregularity" in trade. This irregularity consists mainly in not using the local warehouses or elevators for shipping grain, or in having no dealings with such as do not use these facilities. Evidently these associations have served excellent purposes in improving the distributive system; they have done much to get justice at central markets for the country shipper; and the absence of such associations would be a public misfortune to both producer and consumer, but in spite of these beneficial results there are evidences of their having exceeded their limits of economic usefulness in certain directions, as shown by documents given in the body of this report. Whether they have gone beyond the legal limits of rightful association remains for the courts to determine.

RAILROADS AND COUNTRY ELEVATORS.

(*Part Second.*)

A comprehensive inquiry was made into the relations of railroads to the country elevators in the handling of grain. It was found, as the report shows, that comparatively few of these elevators are under the control of the railroads themselves. Though located on their land, the local elevators are almost entirely owned or operated on lease by three different classes of interests: First, by local grain dealers; secondly, by the warehouse companies, whose central office is at the primary market; thirdly, by a comparatively small number of local farmers' associations. The Line Elevator Company and the Local Grain Dealers' Association constitute the two main features in the local elevator management. No evidence was presented or found that these two interests acted together in any way prejudicial to the producers on the basis of a mutual understanding. Each of these agencies, in a sense, overlaps the function of the other; but again, each has a distinct commercial field, which the other must regard as secondary. The local grain dealers operate with special regard to the handling of the crop at points of origin, while the Line Elevator Companies operate their local elevators only as adjuncts of their grain-trade operations at the primary markets. The producer naturally comes in contact with the local dealers more than with the Line Elevator representatives, and the relations of the two—the producers and local dealers—are not always amicable nor easily defined. The local dealer is inclined to regard himself as an indispensable feature of the trade, whereas the producer naturally desires to act independently, as in case of loading his own cars directly from the wagon. The full limit of such liberty is reached when this slower method of loading would result in car "famines." A limit within which loading has to be done is set by the railroads. If that limit is too narrow, it tends to unduly favor the local dealer; if too liberal, it requires a larger traffic equipment on the part of the road. Such appears to be the situation at the entrance of grain to the distributive process.

COST OF SHIPPING CORN TO PRIMARY MARKETS.

(*Part Second.*)

On the cost of shipping corn to primary markets, the following figures show what proportion of the value in that market goes to the distributer and to the producer. The consumer's price for corn at Chicago July 25, 1900, was 39 cents. The combined expenses of distribution between producer and consumer from Hutchinson, Kans., to Chicago were 13.56 cents. The producer therefore received 25.44 cents, the distributing expenses amounting to 34.8 per cent of the consumer's cost, and the producer receiving 65.2 per cent of that value. Substantially the same result occurs in the shipment from Salina, Kans., to Chicago; that is, the expenses of distribution between farm and primary market are equal to one-third of what the consumer pays for corn in Chicago, and the producer gets the other two-thirds. The result differs little for three other shipping points in Kansas to Chicago. Of 13.56 cents, 2 cents go for local charges and the balance for freight and handling to Chicago. Shipments of corn from Illinois points to Chicago show a much lower cost of distribution. From Media, Ill., to Chicago the combined expenses of distribution on July 25 were 8 cents per bushel for corn. The value of corn at Chicago was 39 cents, so that the producer received 31 cents, the expenses of distribution amounting to 20.5 per cent of the consumer's cost, and the producer receives 79.5 per cent of the consumer's cost. The shipments from Benson, Ill., show a somewhat lower cost of distribution, where the proportion is 16.3 per cent of the consumer's cost, but the two shipments show that the average expenses of marketing Illinois corn in Chicago would probably not be much higher than 20 per cent of the Chicago value—that is, one-fifth of the cost to the consumer goes for carrying the product and about four-fifths of the value goes to the producer. According to the special report of the corn movement to Chicago that market has undergone a change of great advantage to the producer. Practically all grain that comes to the central market is purchased by the dealers at the local markets. The farmers rarely ship any grain on their own account. All the dealers at these local markets are constantly in touch with the central markets. They receive quotations by wire every day, so that they know the prices of grain in Liverpool, New York, and Chicago. Formerly the majority of these buyers shipped to commission houses located at the central market, but latterly this practice has been largely abandoned. The large grain concerns deal directly with the local dealer, and their familiarity with the rapidly changing rate situation enables them to put grain into any one of the great world markets with the greatest economy in cost of transportation and handling. This is chiefly owing to the adjustment of freight rates. The difference between handling by commission through Chicago for exports and the through rate on grain is about 3 cents. This difference is sufficient to give the trade which can command it, as against any one which can not, the mastery of the whole shipping situation.

EFFECTS OF THIS SYSTEM ON PRICES.

(Part Second.)

The effect of this system of handling grain on farm-prices seems on the whole to be favorable to the producer. It has been said, with much confidence, that the consumer gets all the benefits of improvements and reductions in transportation facilities. The truth of this statement is doubtful. The system of transportation which takes the grain from the local station to the foreign consumer brings to the door of the producer the most active kind of competition on the part of buyers. The producer stands on the outer circle of the world's grain market, and the distributer meets him there by proxy in the local dealer through whom he telegraphs his bids, often hour by hour throughout the day. In those bids the pressure of the world's combined demands is reflected. A dozen leading primary markets in the field for the same grain make it practically impossible under such a state of things for the distributer to prevent the producer from profiting by the reduction in the cost of marketing this product. The effect, therefore, of reduction in the expenses of distribution under existing conditions of the competition of cities for the grain trade is to raise the level of the prices to the producer.

GRAIN, COAL, AND COTTON RATES COMPARED.

(Part Third.)

The general course of grain rates as compared with farm prices is shown in a diagram giving the tendency from 1880 to 1897 (p. 61). The average rates per ton per mile over five leading railroads connecting the grain districts with Chicago are given and then compared with the cost of prices of corn and wheat. The decline in railroad rates over the Chicago, Burlington and Quincy Railroad for all traffic was from 1.07 cents per ton per mile in 1880 to 0.784 cent in 1897, showing that railroad rates have declined almost parallel with the prices of corn and oats, and substantially also parallel with the farm prices of wheat. Very much the same may be said of rates on the Chicago and Alton Railroad and on the Chicago, Rock Island and Pacific Railway. On the Chicago and Northwestern Railway and the Chicago, Milwaukee and St. Paul Railway the rates have declined a good deal more rapidly than on the other three roads, largely because these roads have, in a measure, been influenced by conditions affecting lake traffic, which do not in a similar way influence the other roads mentioned. For example, their rates to Chicago would have to be low enough to divert grain from Duluth and Superior, from which points grain can be somewhat more economically forwarded eastward than from Chicago. On the whole, it appears that grain rates and farm prices have, during this period of 17 years, acted with a remarkable degree of sympathy. A comparison of grain-road rates with those on four coal roads and four cotton roads brings out the fact that both of these classes of carriers have reduced their rates in the period under consideration to a greater extent than have the grain roads. The Lehigh Valley road reduced its rate per ton per mile 51 per cent between 1880 and 1897; the Pennsylvania Railroad reduced its rate 54 per cent; the Norfolk and Western, 70 per cent; and the Delaware, Lackawanna and Western, 44 per cent. The greatest reduction in grain rates during this period was 42 per cent, and the difference between the level of rates on the grain roads in 1880 and 1897 is much less than the difference between the level of rates on coal roads between these two limits, 1880 and 1897. On cotton roads the rate per ton per mile has been reduced from over 51 per cent on the Seaboard and Roanoke Railroad to 86.6 per cent on the Mobile and Ohio. The Central of Georgia reduced the rate from 1880 to 1897, 60.4 per cent, and the Southern Railway 54.8 per cent. The difference in the decline of rates between grain roads on the one hand and coal and cotton roads on the other is probably explained by the fact that the downward tendency of railway rates in grain territory had been going on from 5 to 10 years prior to 1880, whereas the reduction in rates on the coal and cotton roads has very generally been the result of influences which operated almost entirely between the years 1880 and 1897.

THE TRUNK LINE AND GULF GRAIN MOVEMENTS.

(*Part Second.*)

The rail movement from primary markets eastward and southward to the Atlantic coast and the Gulf ports has evidently settled down to a division of traffic between the trunk lines and the Gulf lines. The winter wheat belt has shifted southwestwardly to such an extent as to put some of the area of wheat production about as far away from the Gulf ports as from Chicago. If it is not exactly the case at present that the wheat center is equally near the lakes and the Gulf, the tendency is decidedly in that direction, and in case of a light crop on the northern side of the spring wheat and winter wheat belt, and a heavy crop on the south side the advantage in transportation is much more likely to be in favor of the roads reaching to the Gulf ports. This movement of wheat as well as corn is being aided by the increasing importance of the Gulf ports as distributing centers for such products and tropical supplies as enter the United States by way of New Orleans, Mobile, Galveston, and other Gulf ports of entry. We may, therefore, look forward to an increase in the volume of grain trade as well as flour with the ports on the Gulf of Mexico. The loss of prestige on the part of New York in the grain trade is partly apparent and partly real. New York traders handle more grain than formerly between primary markets and Europe by way of ports north and south of New York, because, commercially speaking, the grain moves more economically than it can be moved under existing charges by way of New York. Chicago relies more largely than ever on Canadian facilities to reach Europe. Taking Boston and Montreal together one wonders why grain moves at all through the port of New York with its antiquated methods of handling still maintained by leading carriers at that port. The recently formed pool to divide grain traffic among trunk lines reaching New York will avail little. The cost of traffic in grain, as in everything else, is determined by improvements in facilities for handling the grain more economically than is shown by competing lines and points of shipments. The diversion of grain traffic from Buffalo to Montreal is an illustration of this principle that the cost of traffic seeks the line of greatest commercial economy rather than that of the least physical resistance. Places may pride themselves upon natural advantages to their hearts' content, but business goes with the reduction of rates, regardless of prestige or physical position. The trunk lines of the United States will continue to carry grain, but they must be content to operate within the limits which the Canadian and the Gulf competitors are likely to determine from time to time in their progressive improvement of the systems of handling export grain.

EXPENSES OF MARKETING GRAIN AT ST. LOUIS.

(*Part Second.*)

On the expenses of marketing grain in the interior we have found that the producer receives for grain sent to St. Louis from 70 to 90 per cent of the price paid for consumption at that city. The percentage of value which goes to distribution varies from 10 to 30 per cent. In these expenses are included commission for selling and freight from point of origin to the St. Louis market. There does not appear to be any considerable increase in the cost of marketing from noncompetitive points, indicating that, generally speaking, the territory tributary to the St. Louis market is virtually competitive territory, so far as the different railroads as carriers seeking the grain are concerned. This proportion of expenses to producers' value holds good for all kinds of grain. The marketing of grain at Kansas City shows a similar result, namely, that the cost of distribution varies from about 10 to 30 per cent of the price paid by the consumer.

ECONOMIC IMPORT OF A VISIBLE SUPPLY.

(Part Second.)

A conspicuous feature of the American grain market is the existence of a large visible supply during the greater portion of the year between harvests. Grain, especially wheat, passes out of the farmers' hands early in the season, for good and sufficient reasons, and remains piled up as surplus stock in the country for distribution during the next nine months as the consuming world may require it.

The depressing effect of this large stock of visible wheat upon the market, from the producers' point of view, is inevitable; but it relieves the consumer and the trader, who stands next to the consumer, from anxiety as to where his future supply is to come from. This is one of the causes for the low level of farm prices of wheat under the present methodical system of collecting the crop soon after the harvest and holding it ready for dispersal to whatever part of the world may want it most. Another factor in depressing American wheat prices is the fact that three-fourths of the world's wheat supply comes upon the market within 3 months out of the 12, causing a congestion of stock, which determines the price for the other 9 months of the year. The only uncertain factor in wheat prices after these 3 months is found in the harvests south of the equator, which occur midway between the beginning and ending of American harvests. The Argentine harvest, for example, is a price disturber throughout the greater portion of the year, while the American crop is the greatest factor in the world's wheat market to give stability to present and future prices for consumers. If the world's weekly demand for wheat amounted, on the average, to 7½ millions, and the American market has in stock at the same time several times as much, it is evident that the existence of this stock must favor the consuming world as against the producer. The consumer, however, shares the advantage with the distributer who carries the stock and disperses it as required at such rates of compensation as the competitive conditions of modern trade, together with his individual foresight, enabled him to get for his services. It can not be shown that the producer is the victim of an uneconomical system of grain distribution. If he is the victim of speculative holdings of stocks of grain, he is always at liberty to increase his granary capacity and take a hand in the holding of stocks on his own account. It appears, however, that both in the interior and on the Pacific coast farmers find it best to dispose of their crops of grain at an early date after harvest rather than to wait for a future rise.

Another effect of the existence of a visible supply is to favor the introduction of economies in distribution by resort to handling on a large scale where abundant capital can be applied to the purpose.

DEVELOPMENT OF DOMESTIC DEMAND.

(Part Second.)

A still wiser policy, in the long run, consists in the development of a domestic demand for the grain products of the farm. The growth of dairying and the increase of cattle feeding as a means of disposing of corn in the West and barley in California have enabled the producer to convert these cereal crops into a much more marketable form. The rise of local milling establishments, of local brew-

ing concerns, and other forms of demand which render the domestic producer independent of distributers have greatly increased the income of grain-raising communities and added much to the financial power which only a few years ago was very much wanting throughout the rural districts of the South and West. In spite of centralizing tendencies in the milling interests at some places, local enterprises of this kind are increasing throughout the cereal sections.

COUNTRY CAPITAL MOVING ITS OWN CROPS.

(*Part Second.*)

A special inquiry into the money movement in its connection with the grain movement centering in Chicago indicates that the large money centers have less and less to do with the handling of the crop than in earlier years, and that a very great change has taken place in the financial constitution of rural districts in the past several years, both east and west of the Mississippi. More than ever the rural sections do their own banking, so far as the financiering of the grain crop and other crops is concerned.

SOUTHERN CONSUMPTION HAS RAISED COTTON PRICES.

(*Part Third.*)

The commercial distribution of cotton has been radically influenced by the rise of Southern centers of distribution. It has generally been taken for granted that the cotton mills of the South have to pay for raw material the New York price less the freight from the field to New York. The facts do not justify this conclusion. Cotton consumers repeatedly, if not generally, have to pay as much as or a little more than the New York price of spot cotton for what they require for their mills. Evidently, therefore, almost all of the gain resulting from the competition of Southern mills, Northern mills, and foreign mills for the cotton goes to the benefit of the Southern producer. We must remember that the 450 mills, or thereabouts, in the South, together with the 900 Northern mills, are now consuming quite as much cotton as Great Britain consumes, so that the consumption of about one-third of the crop at home increases the eagerness of the foreign buyer to command an adequate supply. The whole cotton market, therefore, has been put under increasing tension from the consumers' side of the market by reason of the progress of Southern consumption, and the producer is the heir of nearly all of this advantage. This same tension of competition among consumers has forced out of existence a number of uneconomical methods of handling cotton, especially those of the more expensive forms of commission. A Southern buyer for foreign shipment in one of the Atlantic coast cities states that competition at times becomes so keen that the foreign buyer has simply to withdraw from the market. Buyers for Southern consumption frequently do not bid by adding a sixteenth, but increase their bids by one-eighth, and sometimes even more recklessly, when a prospect of a rapid rise in price or of scarcity threatens to leave them without an adequate supply. All these influences indicate that the distribution of cotton takes place under conditions which are favorable to the producer.

THE COST OF DISTRIBUTING COTTON.

(*Part Third.*)

The proportion of the value of cotton which goes to the producer and to the railroad appears to be highly favorable to the producer as well. In North Carolina the proportion that goes to the railroad for hauling a bale of cotton a distance of 20 miles is 1¼ per cent; the producer receives 98¾ per cent when he does his own shipping, as he often does. For a distance of 50 miles the railroad receives

2.2 per cent of the value to the consumer, and the producer 97.8 per cent. For a distance of 100 miles the railroad receives 2.9 per cent of the value and the producer 97.1 per cent. For a distance of 200 miles the railroad receives 4.1 per cent for its services and the producer 95.9 per cent. This is for distribution within the State. The expenses of distribution from Alabama and Mississippi points to North Carolina mills show that the total cost of distribution, including commissions and freight, is 9.1 per cent of the value to the consumer, and the producer receives 90.9 per cent of what the consumer pays. For 1 cent per pound many interior towns in the cotton territory can put cotton into the ordinary course of transit and deliver it, through port of shipment in England or on the Continent, at the consumer's mill. The handling of cotton by way of St. Louis as a market nets the producer from 83 to 87 per cent of its value. In shipping cotton to Japan by way of Galveston the distributer does the work for about 5.3 per cent of the cost to the consumer in Japan, and the producer gets 94.7 per cent of the cost to the consumer.

At present, with the high freight rates on ocean trade, a pound of cotton is carried from New Orleans to Chemnitz, Saxony, direct to consumers, for the combined expense of 1.25 cents. The expenses are shown in a statement in the body of the report (p. 187).

EXPENSES OF MARKETING LIVE STOCK.

(*Part Fifth.*)

Live stock, the second in value among the items of farm investment, performs functions in farm economy that materially affect the market. By means of live stock the producer adjusts production to the changes of the market; at one time by grazing, at another time by fattening on surplus grain, at another time by dairying. Marketing live stock from a distance at any of the four great centers in the West involves a variety of expenses, including commission, yardage, feeding en route, and freight. A steer that cost the slaughter house $75 is sent 160 miles to St. Louis at an expense of $5.66, or 7.5 per cent of the consumer's cost, leaving 92.5 per cent for the producer. The producer seldom gets much if any less than 90 per cent of the cost to the consumer by shipping to this market.

On live stock shipped to the seaboard cities the published rates have not changed since 1892, so that this feature of expense has been practically constant for Eastern consumers and for exporters. In exporting a 1,500 pounds steer from Ames, Nebr., the distributive expenses are 27 per cent of value of the steer in Europe; the producer in Nebraska gets 73 per cent of this value.

As a rule, it may be stated that one-fourth of the foreign value of cattle goes to distributive expenses; one-tenth of the value at interior markets goes for such expenses. Marketing cattle from, say, Nebraska points, in seaboard cities, is done at an approximate expense of 15 to 20 per cent of their value.

The expenses of marketing a 1,000 pounds steer at St. Louis were analyzed still further to show the proportions that are absorbed by the railways, by commissions, and by maintenance charges on live stock. The results are as follows:

Comparison of marketing expenses by distances based on a 1,000-pound dressed-beef steer.

Kinds of expense	100 miles from market.	500 miles from market.	1,000 miles from market.
	Per cent.	*Per cent.*	*Per cent.*
Railway charges	60	78.3	85
Commercial charges	37.5	16.3	11
Maintenance	2.5	5.4	4
	100	100	100

DISTRIBUTION OF DAIRY PRODUCTS.

(*Part Sixth.*)

The entire development of dairying shows marked tendency toward a division of the industry between the milk trade on the one hand and the creamery system of local manufacture of butter on the other. The milk trade—the second in magnitude among dairying interests—is much in need of improvement from the producer's side of the trade. The expenses of distributing a 40-quart can of milk to tenement families in New York City are 68 per cent of its cost to the consumer, the producer receiving 32 per cent of that value. The wholesale price to producers is nominally much higher than what the producer really receives, because the wholesale rate is subject to deductions for station charges, etc. Milk which is quoted at 2.75 cents per quart netted the producer from zone C, who shipped to the New York market, 21 per cent less, or only 2.175 cents per quart after deductions were taken off.

The freight rates on butter from the West have not changed to any considerable extent in recent years. From Elgin, Ill., the great creamery center, to New York, the identical rate is in force now that was charged in 1880. Therefore much of the talk about the universal and continuous decline of railway rates is not based on fact. The diagram (Part Sixth) illustrates the relation of rates on butter and prices for butter of the Elgin grade from 1880 to 1900. The noticeable feature is that for later years prices tend toward an all-year-round level and do not show the variation between summer and winter prices of 20 years ago. Prices of butter are lower but more regular. The best prices are paid for Eastern butter sold to private customers, to whom it is expressed from producer to consumer direct, without middlemen of any kind having a hand in its distribution. On this account Eastern butter could not be profitably exported; the lower-priced butter from Ohio and farther West has to be depended upon for foreign markets. The low price of American butter in foreign markets is not hard to account for when we remember that 12 per cent of what was exported from New York in the year 1899-1900 was returned to this country again as in some respects below the commercial standard it was represented to be.

On the cost of distribution of Elgin butter it may be said that the standing difference in the wholesale price between Elgin quotations and Philadelphia quotations is 1 cent per pound. If butter sells at Elgin at 20, its Philadelphia equivalent is 21 cents. If the consumer pays, as a rule, 25 cents, on this basis the whole outlay per pound is 5 cents between the Elgin producer and the Philadelphia consumer—that is, 20 per cent of the value to consumers goes to distributive expenses, and this is most probably divided up about equally between transportation and commissions on the one hand and profits of retailing on the other.

COLD STORAGE AND PRICES.

(*Part Seventh.*)

The part of cold storage in improving prices to producers and consumers is that of evening out the course of prices by laying up stocks when the supply is too abundant to maintain prices and by marketing these stored-up stocks when the supply is too small to prevent a rise in prices to consumers. This new factor in farm prices and consumers' prices is an important one, destined to development which will improve materially the system of marketing certain products of the farm.

EXPENSES OF MARKETING TOBACCO.

(*Part Eighth.*)

The expenses of marketing tobacco in the South are as follows: From North Carolina planter to Richmond (Va.) consumer, by way of warehouse market, with bonded inspection, the distributive expenses are 14.3 per cent of the cost to the consumer; the producer gets the difference, 85.7 per cent. Without bonded inspection the producer gets 88.4 per cent on the grade of tobacco in question. (See Grade A in report.) On higher grades the producer's receipts net him as high as 94.8 per cent. (See C grade, costing 20 cents per pound, in report.) Generally the producer receives net between 85 and 95 per cent of the cost to consumer at the factory.

EXPENSES OF MARKETING WOOL.

(Part Ninth.)

Western wool reaches the Eastern manufacturer at Philadelphia at a cost of from 3 to 4 cents per pound. At 20 cents per pound to the Philadelphia factory the distributing agencies would receive 20 per cent of its value and the producer 80 per cent, at a cost of 4 cents per pound for distribution. At a cost of 3 cents distributers would receive only 15 per cent and producers 85 per cent of its value to consumers. If the price falls to 16 cents to consumers the distributive expenses would amount to 25 per cent of its value, and the producer would get 75 per cent.

DEFICIENCY OF PUBLIC MARKETS.

(Part Tenth.)

Selected cities show the expenses of distributing various articles of domestic consumption. The schedules of expenses explain themselves. The striking feature of these results is the low proportion of the cost to consumers that goes to producers. Furthermore, the absence of public markets administered in the interest of producers and consumers, and not wholly in the interest of distributers, is a noteworthy feature of American city markets. The poor have to bear a heavy tax on account of the lack of public markets well managed. The experience of New York is typical. The commissioner of markets there says:

"The original scheme was to establish a common ground for the producer and purchaser, and thus obtain food products cheaper than otherwise; but the practical management of them has been a failure. Stands are now let by the city at a nominal rate and relet to the stand owners, who have to pay substantial prices for them. The purpose is defeated, and the middlemen make money out of them without rendering any benefit."

Such markets as those which prevail in the towns of eastern Pennsylvania make the expenses of living materially lower than the system of expensive corner stores, whose proprietors the community supports because there is no foresight in the municipal policy.

On the whole, nine-tenths of our cities are behind the distributive experience of the best-fed communities for want of proper facilities for bringing producers and consumers together at some convenient place or places at regular times.

THE PRODUCER'S POSITION IN CITY MILK MARKETS.

(Part Eleventh.)

The milk trade in cities is, on the whole, conducted more advantageously to both consumers and producers in smaller cities than in the larger ones, so far as price is concerned. Producers for large city markets, unless they have alternative facilities for converting milk into butter or cheese, are so much at the mercy of the wholesale trade that the producer may be selling milk below cost just because he has no other way of utilizing it than sending it to the city. The remedy for this is association of producers to make better terms with wholesale contractors and a judicious development of creamery facilities or farm dairying side by side with wholesaling milk for the daily city supply. The expenses of distribution are detailed in this part of the report. Generally, however, the producer's position in supplying milk for cities is in need of improvement.

COST OF MARKETING BROOM CORN.

(Part Twelfth.)

In the broom-corn trade Illinois is the leading State, and Evansville, Ind., one of the leading markets at this date. At a cost to the consumer of $68 per ton the cost of distribution from the Illinois farm to the Evansville factory is $8 per ton—$2 for local buyer's charge, $4 for freight to Evansville, and $2 more for hauling and storage. The producer thus gets 88 per cent of the value to the consumer and the distributers get 12 per cent.

EXPENSES OF MARKETING HAY.

(Part Thirteenth.)

The cost of marketing hay at New York from up-State producers is high, the producer receiving but 60 per cent of the value to the consumer, on the basis of our figures obtained at New York, at first hand. At Kansas City the producer receives from 38 to 56 per cent of the cost to the consumer; at St. Louis, from 56 to 83 per cent; at Macon, Ga., from 50 to 59 per cent of the Chicago price, but possibly not more than 40 per cent of what the Southern consumer pays.

THE CALIFORNIA FRUIT TRADE.

(Part Fourteenth.)

The most noteworthy development in the direction of improving the system of marketing fruits and orchard products is that of the California growers of the products peculiar to that section of the country. The results of their experience are well worthy of study by all producers interested in better commercial methods of reaching the consumer. The rate of transportation in oranges is about 90 cents per box from California to all points east of Colorado; to London it is $1.60 per box. Boxing and cartage cost 35 cents per box; commission, 10 cents, and refrigeration from April to November 25 cents, making a total of $1.60 for distribution to the wholesale dealer. The price to the consumer depends so much on quality and size that it is difficult to figure his share in distribution. If, however, the fruit dealer pays $3.20 for a box of oranges, which he sells at the rate of two for 3 cents, or $3.60 per box containing 240 oranges, he makes 40 cents on the box, which is all that many of the corner fruit stands make. Allowing that the producer gets $1 a box net, we have $2.60 as distributive expenses of all kinds, or 72 per cent. The producer gets the difference, or 28 per cent, of the consumer's price. This corresponds approximately with the results reached by special inquiries made in several cities.

On the cost of marketing vegetables the results are found in the schedules under this section. Roughly grouping these results, vegetables on the average cost fully 50 per cent of their value to consumers to be distributed from producers to consumers in cities without public markets.

DEFECTIVE FEATURES IN AMERICAN DISTRIBUTION.

(Part Fifteenth.)

There are certain special features in our system of reaching markets that make the methods burdensome to producers and consumers alike. First, the expenses of hauling are high. We do not utilize our intermunicipal trolley lines to any extent for supplying markets with fresher and more varied kinds of farm products, such as vegetables and fruits. Here lies an undeveloped resource. Our roads are poor, and it is too expensive to use them often. The average expense of hauling farm produce to the primary shipping point in West Virginia is over $4 per ton. Farmers can hardly prosper at this expense, nor can consumers get what they would otherwise consume.

Our retailing system in many smaller towns in the East is preying on consumers and producers for want of a public market where consumers and producers could meet and deal directly. While there is a necessary and a legitimate sphere for the retailer, the class is more prone to multiply its numbers than any other part of our distributive arrangement. Public markets will tend to eliminate the useless members and improve the services of the survivors, but no community should depend solely on its retailers alone for handling its supply of farm products. If it does so, it does it at the heavy expense of the poor and the less capable class of consumers.

The consuming public is far behind scientific progress in the matter of its choice of foods. Vegetable foods could in many cases be substituted for animal foods at much less cost to consumers, thereby stimulating the demand for the less expensive foods. A watchman's family in New York, for example, paid $5.69 for animal food, whereas they could have bought with $1.25 the amount of vegetable food which would have afforded the same quantity and quality of nourishment. By educating the consumer the development of the demand for less expensive and the more economical food supplies may be accomplished.

The following gentlemen served with much credit as special agents at different places where inquiries were made:

Mr. Cuthbert Powell, Kansas City, Mo.; Mr. E. S. Tompkins, St. Douis, Mo.; Mr. James Peabody, Chicago, Ill.; Dr. C. E. Peck, Chicago, Ill.; Mr. N. I. Stone, New York City; Mr. W. G. M. Stone, Denver, Colo.; Mr. Will Owen Jones, Lincoln, Nebr.; Mr. John C. Hanley, St. Paul, Minn.; Mr. James B. Hunnicutt, Atlanta, Ga.: Mr. John Hart, Nutley, N. J.; Mr. S. A. Roach, Cleveland, Ohio; Mr. E. W. Wright. Portland, Ore.; Mr. Levi Chubbuck, St. Louis, Mo.; Mr. Henry A. Forchheimer, Mobile, Ala.; Mr. D. Brugman, Little Rock, Ark.: Mr. Dean Gordon, Wichita, Kans.; Mr. J. F. Jackson, Richmond, Va.; Mr. H. J. Bass, Durham, N. C.; Mr. William M. Hardcastle, Washington, D. C.; Mr. N. F. Porter, New York City; Mr. J. Halleck Crowell, York, Pa.; Mr. D. W. Willson, Elgin, Ill.; Mr. Sam C. James, Evansville, Ind.; Mr. Joseph D. Morten, Cincinnati, Ohio; Mr. Vories P. Brown, San Antonio, Tex.; Mr. M. T. Smith, Richmond, Va.; Mr. E. O. Hubbard, Milwaukee, Wis.; Mr. L. W. Zatman, Grant Park, Ill.; Mr. A. A. Munro, Makison, Wis.; Mr. Will Payne, Chicago, Ill.; Mr. F. C. Friedlander, San Francisco, Cal., and Mr. Walter Whately, Crozet, Va.

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Respectfully submitted.

JOHN FRANKLIN CROWELL, *Expert Agent.*

WASHINGTON, *January 11, 1901.*

PART FIRST.

THE MAIN FACTORS IN COMMERCIAL DISTRIBUTION OF FARM PRODUCTS IN THE UNITED STATES.

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1. THE FARM SURPLUS—THE SUBJECT OF COMMERCIAL DISTRIBUTION.

There were, by the census of 1890, 4,564,641 farms in the United States. The value of the products of these farms for the previous year of 1889 was estimated at $2,460,107,454—in round numbers, 2,500 million dollars—representing a capital of, approximately, 16,000 millions in farm valuation. The average income of the American farm was at that time $539 per annum.

Of these 4½ million farms practically every one produces a surplus product of some kind or quantity which passes into the distributive system on its way from producer to consumer. The problem of this inquiry is to study the disposition of this annual surplus of the American farm.

The distribution of the annual product of the American farm is a work of such magnitude as few are prepared to appreciate. Our phenomenal progress in manufacturing and in internal and foreign commerce has, in recent years, rather tended to overshadow agriculture as a phase of our material development.

Up to the time of the civil war it was the fashion to think of ourselves as an agricultural people. Our great problems were then still agricultural in their essential character. They were the opening up of the interior lands, first by turnpike, then by steamboats on rivers, then by canals, and then again by railroads, so that the surplus crops could be gotten to the consuming centers of population in the East and in Europe. We were, until the civil war, mainly occupied in distributing the population over the public lands and in making the internal improvements which this expansion required. From 1865, the end of the war, to 1875 the expansion of the agricultural domain was the dominant feature of our material development.

Within the next 20 years (1875–1895) this policy bore fruit in giving the United States the foremost position among agricultural peoples. Our cereals, our live stock, and our cotton were trebled, and we sent three times as much to supply other peoples as was formerly the case.

In spite of all progress made in other departments of economic enterprise, the United States of America had hitherto been primarily an agricultural country. Our chief importance to the world consisted in the fact that we were first of all the producers of the raw materials for feeding, clothing, and employing the consuming populations of other nations.

2. THE AGRICULTURAL SURPLUS AS MEASURED BY EXPORTS.

If the value of an industry can be measured by the surplus it can spare for export, then agriculture continues to rank first among American industries. For the 5 years from 1894 to 1898 this exported surplus averaged $663,536,201 per annum, as follows:

Comparative value of agricultural exports for fiscal years 1894–1898.[1]

Year.	Value of agricultural exports.	Value of all exports.	Per cent of agricultural exports.
1894	$636,633,747	$869,204,937	73.24
1895	558,385,861	793,392,599	70.38
1896	574,398,264	863,200,487	66.51
1897	689,755,193	1,032,007,603	66.84
1898	858,507,942	1,210,291,913	70.93
Annual average	663,536,201	953,619,508	69.58

[1] Distribution of agricultural exports, page 13.

The later returns show that in spite of the expansion of our foreign trade in manufactures our primacy is still agricultural. The following table gives the principal class of farm products for the fiscal years 1899 and 1900.

The Bureau of Statistics of the Treasury Department reports details of agricultural exports for the fiscal year ended June 30, 1900, from which the figures in the following table have been obtained. The foreign trade of the United States during that period was the largest in its history, the total imports amounting to $849,714,670; total exports, $1,394,186,371; the total foreign trade aggregating $2,243,901,041, as against $1,924,171,791 for the fiscal year 1899, $1,847,531,984 for 1898, and an annual average for the five years, 1893 to 1897, of $1,655,753,040. This showing is due very largely to the increase in exports, those for the fiscal year 1900 having exceeded the imports by $544,471,701. The figures in the subjoined table refer only to the principal agricultural products, many items of minor importance being omitted:[1]

Domestic exports of principal agricultural products from the United States for fiscal years 1899 and 1900.

Exports.	1899.		1900.	
	Quantities.	Values.	Quantities.	Values.
Animals, live:		*Dollars.*		*Dollars.*
Cattle . . . number	389,490	30,516,833	396,977	30,623,768
Hogs . . . do	33,031	227,241	50,975	392,758
Horses . . . do	45,778	5,444,342	64,709	7,612,056
Mules . . . do	6,755	516,908	43,340	3,919,478
Sheep . . . do	143,286	853,555	125,552	732,870
Other, and fowls . . . do	. . . . .	322,037	. . . . .	284,461
Dairy products:				
Butter . . . pounds	20,247,997	3,263,951	18,262,238	8,142,378
Cheese . . . do	38,198,753	3,316,049	48,375,862	4,939,255
Eggs . . . dozen	3,693,611	641,385	5,910,162	982,421
Beef products . . . pounds	476,030,644	34,087,614	523,285,625	42,169,918
Hog products . . . do	1,700,410,362	116,379,574	1,555,244,617	112,972,916
Wool . . . do	1,683,419	237,350	2,200,309	387,239
Breadstuffs:				
Barley and products . . . bushels	2,267,403	1,375,274	23,661,662	11,216,694
Buckwheat . . . do	1,533,980	846,028	425,822	254,847
Corn . . . do	174,089,094	68,977,448	209,348,273	85,206,389
Corn meal . . . barrels	791,488	1,775,868	943,782	2,148,410
Oats and products . . . bushels	33,531,362	11,083,528	45,019,202	14,052,440
Rye and products . . . do	10,169,822	5,951,093	2,382,012	1,456,812
Wheat . . . do	139,432,815	104,269,169	101,950,354	73,237,040
Flour . . . barrels	18,485,690	73,093,870	18,697,825	67,755,968
Bread and other breadstuffs	. . . . .	4,624,833	. . . . .	4,766,793
Bran, middlings, etc . . . tons	127,953	2,002,588	166,601	2,638,638
Cotton . . . pounds	3,787,719,122	210,089,576	3,126,225,588	242,988,978
Cotton seed . . . do	34,413,806	197,023	49,855,238	346,230
Oil cake and meal . . . do	1,079,993,479	9,253,398	1,143,704,342	11,229,188
Oil . . . gallons	50,627,219	12,077,519	46,902,390	14,127,538

[1] From the Crop Reporter, August, 1900.

Domestic exports of principal agricultural products from the United States for fiscal years 1899 and 1900—Continued.

Exports.	1899.		1900.	
	Quantities.	Values.	Quantities.	Values.
		Dollars.		*Dollars.*
Hops ....pounds..	21,[illegible]45,512	3,626,144	12,639,474	1,707,660
Flaxseed ....bushels..	2,830,991	2,815,449	2,743,266	3,475,417
Oil cake and meal..........pounds..	487,177,300	5,277,744	483,130,182	5,528,331
Glucose..........do....	229,003,571	3,621,890	222,901,159	3,600,139
Apples:				
Dried..........do....	19,305,739	1,245,733	34,964,010	2,247,851
Green..........barrels..	380,222	1,210,459	526,636	1,144,655
Rice and products..........pounds..	15,334,689	118,809	40,949,810	666,716
Grass seed:				
Clover..........do....	19,980,434	1,264,922	32,079,371	2,379,372
Timothy..........do....	16,149,611	492,710	15,078,186	505,758
Starch..........do....	110,193,776	2,292,843	124,911,763	2,604,362
Sugar..........do....	9,865,347	440,477	22,508,403	1,015,092
Molasses and sirup..........gallons..	15,752,730	1,910,241	15,072,144	2,116,787
Tobacco..........pounds..	283,613,122	25,467,218	344,655,453	29,422,299
Total of principal agricultural exports..........	....	751,211,693	....	796,299,922
Total of all agricultural exports....	....	784,776,142	....	835,912,952

The relative importance of agricultural exports for 1899 appears from the table of comparative values.

Comparative value of all exports for the year ending June 30, 1899.[1]

	Value.	Per cent.
Agricultural exports..........	$784,999,009	65.20
Manufactures..........	338,667,794	28.13
Mining..........	28,832,547	2.39
Forest..........	42,316,779	3.51
Fisheries..........	6,025,446	.50
Miscellaneous..........	3,281,559	.27
Total exports..........	1,204,123,134	100

[1] Monthly Summary, June, 1899, page 3011.

Our exports of agricultural products still hold the rank of first magnitude, both in value and in volume. It is therefore certain that both for ourselves and for foreign consumers of our surplus products the agricultural function of this nation in the world's economy still transcends that of other economic interests combined. All other interests combined might be blotted out of existence with less sacrifice to ourselves as a people and with less suffering to the world as a whole than would be the case if our agriculture ceased to figure in supplying the world's recurrent wants. We are, after a century and a quarter of development, still a nation of farms. It is the farm as a socio-economic institution, rather than the factory, that constitutes the distinctive and fundamental feature in our industrial economy.

3. THE FREE-FARM FAMILY THE PRODUCING UNIT.

The cereal crop in the United States is still the distinctive feature of rural industry, and the position of the producer of cereals in the United States is the outcome of historical conditions. Free land, free immigration, and free private enterprise in building railroads into the public domain, until millions of independent producers poured their surplus into the channels of the world's trade, where it now competes with that of all other surplus countries—these are the factors in national development which give the producers of cereals their present economic position. The economic policy of modern nations is beginning to lay more stress on the importance of rural prosperity as a source of strength in international competition. Equally positive has been the policy of industrial legislation to safegard the family as the wage-receiving unit among the laboring classes of large industrial centers. In the study of our distributive system this factor is taken as a fundamental one. At the beginning stands the farm family as the producing unit. Its interest should always be equal with that of the consumer. The commercial movement is always conditioned on the producer's prosperity. It is not sufficient to say that the producer must get what he can. He must, on the whole and in the long run, get what is economically just. Otherwise, we put a premium on social revolution. The isolated position of the rural producer prevents him from utilizing concert of action to the extent that urban interests have always done. The individual household, which is tne unit of agricultural enterprise in the United States, is the producer and the laborer's household is the main consumer, whose economic positions this inquiry has constantly in view. This social institution—the free-farm family—is the economic unit of rural prosperity.

4. THE GROWTH OF CITIES AS CENTERS OF CONSUMPTION.

This is essentially the standpoint of agriculture as a producing interest. Yet the producing interest is only one side of the economic development arising from the farm family. The other side is revealed in the marvelous growth of our cities as centers of consumption of surplus farm products.

In the normal order of national growth the farm family produces a surplus of population as well as of products. Out of this surplus population the cities are first formed and then replenished. That portion of the farm family which is not required for the labor of the farm is freed to find a field where its labor will afford it a larger return. If it remained on the farm each succeeding generation could get but a diminishing share of the farm income, as the French peasant does to-day. Wherever the surplus labor of the farm can sell its services more advantageously to commerce or industry than on the farm, then and there centers for the consumption of farm products arise. The greater this aggregation of population in towns and cities the larger the consumption of surplus farm products, both in volume and variety. In the older states of Europe the consuming centers tend to outgrow the producing areas in their efforts to supply the means of subsistence. Hence the demand for American farm surplus. The extent to which the farm family can throw its surplus labor into the labor market of European cities is limited. Consequently this surplus is turned away from European cities to found new farm families in the New World. Therefore agriculture in the United States has hitherto been differently situated, owing to its free lands. This free formation of farm families goes on until the point of diminishing return per unit of labor in the farm household is reached. Then, again, the family reduces its labor force by throwing off surplus labor and substituting capital in the form of machinery.

This tendency to substitute capital for labor is a characteristic of all modern agriculture, but preeminently of American agriculture. The United States stands in an altogether different stage of development as compared with that of western Europe. There the equilibrium between agricultural production and consumption by cities is wanting. The cities consume more farm products than the farms can produce at modern prices. This is more so in Germany than in France, whose agricultural policy leans more toward one of self-sufficiency. But in the United States this differentiation of the national population into rural producers and urban consumers of surplus farm products still constitutes the fundamental division of labor in our economic organization. In this development rural production and urban consumption are complemental functions. As the urban population increased, the producing area widened in the most favored directions to meet the growing demands for farm products at home and abroad. Within the city itself markets arose and that economic class appeared which is occupied with the task of adapting the farm products as to quantity, quality, and timeliness to the wants of household consumption. In the country, stretching ever farther away from this aggregation of consumers, systems of transporting the surplus to the city arose.

5. THE THREE INTERESTS IN COMMERCIAL DISTRIBUTION.

This commercial system unites rural producers and urban consumers into a threefold nexus of interests. The system is, therefore, analogous to a bridge buttressed on the banks of a stream that separates these producing and consuming communities, each of which seeks to meet the wants of the other, but can do so only through the agency of the mercantile system of distribution, which maintains its prestige in economic society by virtue of its success in supplying the consuming community with the surplus of the producing community.

The distribution of the products of farm industry has been a perennial subject of legislation, an endless occasion of class conflict, and a leading issue in the annals of human enterprise. When, therefore, the question of the justice or injustice of an existing system of distribution comes to the front, the part not only of public safety, of popular contentment, and of encouragement to individual industry requires that the facts in the situation be resolutely faced without fear or favor. It then becomes necessary to analyze the conditions, so that its essential features may be brought into relief and its incidental elements relatively ignored. Thus only may the mind judge, in the large, of the real issue, relieved of irrelevant factors. Thus only can the principles of prosperity be grasped in the rapid succession of economic changes. Thus only can the problems be stated which arise when we attempt to apply these principles to existing conditions in this effort to reformulate a statement of national policy. In this effort to apply principles to conditions, the only policy which can finally prevail must result in a practicable adjustment of the several national interests one to another. Such adjustment will be workable only as it enables each and all to share equitably in the national rural income. And equitable sharing in the distribution of the annual income of agriculture means not only that none of the agencies of enterprise shall exhaust the share of any other agency to the extent of impairing the efficiency of that agency, but that each shall profit by the prosperity of any other one. Manufacturing, commerce, and finance can not prosper permanently at the expense of agriculture without tending to increase the cost of the raw materials and of labor, on which all these depend. Any such increase in cost lessens the competitive capacity of the nation as a whole with other nations. The holding of foreign markets for our manufactures and of foreign fields of investment for our financiers hinges directly upon the efficiency of our agriculture.

The general problem of distribution looked at from within the nation is one of adjustment of these three economic agencies to the requirements of national prosperity. These agencies have been called into existence by historic forces. Their utility is undeniable, and hence their elimination is not part of our problem. But their internal organization and their external relations are questions which national policy has constantly had to reconsider. It was just such problems as these—problems arising out of the adjustment of agriculture to other divisions of economic enterprise—that first gave birth to and later developed the science of political economy. This science pointed out to statesmen for the first time the principles by which these national interests must be guided in order to guarantee prosperity at home and prestige abroad. To-day it is even more true that the only scientific instrument known to modern peoples for correcting wrong economic tendencies and coordinating economic interests on sound lines of development is found in economic investigation.

6. THE ESSENTIAL FEATURES OF THE DISTRIBUTIVE SYSTEM.

The first thing to be recognized in our inquiry is the nature of the main fact under consideration. We have first to point out that the system of distribution of farm products is essentially a speculative system—a system of risks and adjustments of present and prospective resources to present and prospective needs among communities, local, national, and international. This system is not, moreover, a matter of recent invention. It is the product of our own economic history as a land-loving and city-building people. Stated in the form of propositions, this distributive system presents itself as follows:

I. The existing system of distributing that portion of the surplus farm products which is required for domestic consumption is the necessary outgrowth of the fundamental division of labor between town and country in our national development.

II. This distribution of surplus farm products, regarded as a commercial system, is a development out of the constantly widening distance between the areas of surplus production and the centers of consumption arising from the territorial expansion of the United States.

III. The distribution of the excess of surplus farm products among the deficit nations of the earth—that is, the distribution of that portion not required for domestic consumption—involves so many elements of risk to capital and labor as to make this world-wide service to society a distinctively speculative business, of an altogether too hazardous character for producers or consumers to render without subjecting society to still greater risks of providing a regular food supply.

IV. These speculative risks, inseparable from the international distribution of surplus farm products, have inevitably reacted upon producing and consuming nations in such a way as to develop a new division of labor—that of capitalist-speculator, whose function it is to relieve both producer and consumer of the hazards of distribution, so that the surplus of one portion of the earth may regularly be supplied to the deficient portion at such a price as will in the long run a little more than balance the gains and losses of this species of commercial enterprise without unduly enhancing the cost to the consumer or unduly depressing the margin of profit to the producer.

7. THE PLAN OF THIS INQUIRY DEFINED AND DEVELOPED.

The first object of an expert inquiry is to ascertain the essential facts that pertain to the conditions under investigation. The second object is to state the leading problems that arise out of the relation of the several interests involved in the conditions being investigated. The third object is to indicate the working principles by which the solution of the problems may be sought in the effort to find lines of practicable adjustment of the several interests involved. The fourth object is to suggest some comprehensive policy which, under existing conditions and in the light of these principles, would seem to be most promotive of general prosperity.

The object of this inquiry is to make analysis of the systems of distributing farm products for the purpose of ascertaining the bearing of such systems upon production and consumption. The main line of investigation concerns itself with the economic relations which any feature of the distributive system bears to the prosperity of the producer rather than to the purchasing power of the consumer. Economic theory in its more recent development has laid most emphasis upon the interests of the consumer as the determining factor in giving value to the product of labor. Scientific inquiry has possibly on this account overlooked much of importance in the influence which the distributive system has upon productive enterprise. It is undoubtedly true that no part of our economic organization has magnified its importance more than the agencies of commerce have. The growth of cities as distributing centers from small towns to commercial emporia within the last quarter of this century illustrates how rapidly the agencies of distribution have grown with the increase of consuming population on the one hand and the progress of agricultural production on the other. Farms have multiplied at an enormous rate since 1875, and the nonfarming population has increased at a wonderful rate, at least doubling itself within this period. But neither of these developments can compare with the development in the domain of commerce.

Commerce may, for our purpose, be divided into two main movements: First, the distribution of the raw materials of rural industry from producer to consumer. The other division of commercial activity concerns itself with carrying manufactured goods back to the producer of farm products, in which case the farm household becomes the consuming institution.

The connection between the manufacturing establishment and the farm is a mercantile relation. The character of this relation is such that the purchasing power of the products of the farm, as well as of the factory, depends very much upon the economical soundness of the distributive system. Any unduly expensive method of distribution, any retention of a belated method of handling commodities, any excessive use of capital or labor, any multiplication of intermediate agencies of trade, will tend to reduce the purchasing power of the products of the farm as well as of the factory. These interests are so widely separated under the present organization of distribution that it becomes necessary to make inquiry at frequent intervals into the economic efficiency or inefficiency of this highly developed branch of our social service. Periods of agricultural depression have frequently forced such inquiry to the front. Periods of industrial revolution, such as the one through which manufacturing industries have now passed from the small to the large form of industrial organization, have always made such inquiries a necessity of national prosperity. Not only, therefore, have the interests of individual classes, but also the welfare of the nation as a whole, required a periodical investigation of the soundness of the distributive machinery.

Of the two divisions of distribution mentioned above, this inquiry is concerned with that part of the process which is taken up with the disposal of the surplus products of the farm, with the relation of this system to the prosperity of agriculture, and to the purchasing power of the producer. It is fair to say that the economical thought of the nation is awakening to a clearer appreciation of the importance of improving the commercial relations of agriculture. The failure of the thousands of cooperative societies comprise so many criticisms of commercial conditions. It has become evident that rural prosperity means high rural purchasing power, and high rural purchasing power means economical access to centers of consumption. The farmer is entitled to the lowest possible cost of distributing his surplus consistent with natural advantages of shipment and the ordinary profit on capitalized facilities of transportation. Every river and every port belongs as much to the producer of surplus farm products as it does to the manufacturer and to the merchant, as an economical agency in finding a market for his surplus. Governor Black, of New York, clearly presented this right of the rural producer to the cheapest access to the world's markets in his annual message of 1898 in the following declaration:

"It is said that the commerce tributary to New York City has been checked and discouraged by a too narrow policy prevailing there with reference to terminal facilities. If this is true that policy should be corrected, no matter whether it is pursued by the city or by individuals. The facilities of New York belong not to the city or even to the State, but to the country. If by location she is the best point of shipment to foreign markets for Western farmers, then her advantages should be open no more to a Broadway merchant than to a Kansas farmer; and the rights of the latter should not be abridged by restrictions or charges which would drive him to Galveston or New Orleans. Every citizen in this country has a right to get to the sea with his product, no matter whether he lives on the coast or not, and he should not be subjected when there to unreasonable demands from those who have accommodations which he is obliged to employ."[1]

8. POPULAR CONCEPTION OF COMMERCIAL DISTRIBUTION.

Agricultural enterprise in the United States at the present time may be characterized as generally undercapitalized, in many or most parts undermanned, and still dominated by the historic tendency toward an increase of productive farm acreage. In spite of the fact that the best part of the once splendid public domain has been appropriated, and that comparatively very little good agricultural land remains open to settlement, it still remains true that this land movement is the key to the American agricultural economy. Legal preemption of land is a long ways from its economic development, and the proportion of unimproved to improved acreage already incorporated in farms is still so great as to make the land factor by all odds the most important economic factor in the question of farm policy in the United States. The presence of undeveloped cheap lands, where labor and capital are scarce and dear, not only determines what kinds of products shall be produced; it likewise determines the level of prices at which all similar products must pass into the markets. The wheat, the corn, the live stock raised on that portion of the land which produces with the least economic outlay per unit of product still continues to determine the lower level of prices at which all such products shall pass into the world market. The upper level of prices, which is not reached so long as the productive output increases more rapidly than consumption, is determined by that considerable portion of the crop which is produced with the maximum expenditure of economic resources. Farm prices range in the long run between these two levels. The price level in the domestic market follows closely the lower level of values fixed by the world market. So that, under historic conditions of very rapid expansion in production by increased area, the purchasing power of a unit of these farm products was more and more determined by the low-cost offerings of the entire world. This fact makes the agricultural situation in the United States a part of the worldwide system of distribution comprehended in the mechanism of the world market. The present position of land as an economic agent in supplying man with subsistence explains the low level of farm prices the world over. Land is now and has for many decades been the cheapest factor in the production of farm products. The rate of interest on capital in recent times has been and still is too high and the wages of labor too expensive to enable agriculture to compete with commerce or manufacturing for command over these other two productive agents at the prevailing level of prices. Therefore national policy has made it easy since the middle of the present century to command cheap land as family property, to wait for the natural increase in the farm household for the labor supply needed to take up the newer or improve the older lands, and to depend mainly on the progress of society to increase the capital value of farm property.

The adjustment of the different parts of national society to the course of this development is, possibly, the main economic keynote in American history. Throughout all this movement there runs a current of agrarian discontent. Wherever that discontent found expression in the past it took the form of agitation against an imperfect and inefficient system of commercial distribution.

This view of the commercial system is not, therefore, a passing phase of rural opinion. It is a historic conviction which has taken successive shapes in public policy. Our financial history previous to the civil war is full of this conviction. It gave birth in more recent times, for example, to granger legislation of the Central and Northwestern States, as represented in the Potter law requiring railroads in Wisconsin to charge not above a fixed rate. It later took the form of the interstate-commerce act, and about the same time found expression in a still more general development—the antitrust acts on the statute books of almost every State of the Union, except New Jersey and Delaware. For industrial and commercial corporations are primarily regulators of the relations between producers and consumers. Whatever the forms they take, or whenever they force themselves into public consideration, there is a permanent body of conviction which regards them as embodying the economic iniquity of existing systems for the distribution of surplus farm values. So that, at the present day, there is probably no impression more deeply settled in the minds of the rural population of the United States than this, that the existing system of distributing surplus farm products between producers and consumers is so organized and operated as to yield a minimum return to capital and labor employed in agriculture and a maximum return to capital and business capacity employed in commercial distribution. According to this view the distributer pays the producer only enough to make sure of a sufficient supply; to pay anything less than this minimum would not bring into market so much as the consumer is willing to pay for, and so would lessen the distributer's volume of business; to pay anything more than the minimum would bring into market a supply in excess of what the consumer is willing to pay for, and so leave part of the supply on the distributer's hands. Within these two limits, of the willingness of producers to provide an adequate supply and of consumers to furnish a sufficient demand, lies the broad domain of commercial distribution, whose combined agencies tend to minimize the rewards of agriculture and maximize the profits of trade. Such is the current conception of distribution.[1]

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[1] Report of the New York Commerce Commission, 1900, p. 4.

The agencies of distribution ordinarily charged with finding a market for surplus farm products vary, of course, with the degree of development of the distributive system. Regarding them as a system of separate agencies, they may be divided into four main divisions. In the more complex mechanism of marketing this species of commodities there are (1) the local buyer or shipper from the producing district to the centers of concentration or consumption; (2) the transporting agencies (railways, steamships, etc.) connecting the areas of production with the centers of population; (3) the commission merchants, warehousemen, and wholesale dealers who collect and disburse the stocks of the various products, and (4) the retailer whose part is to supply consumers with these commodities in quantities and qualities to suit the requirements of his particular class of customers. These four classes of distributers apparently comprise all the interests that enter into the work of selling the surplus crops of the farm.

9. DEVELOPMENT OF SURPLUS DISTRIBUTION.

The distribution of farm products has to take into account the fact that the farm family is no longer the leading consumer of the products of its own labor. In the modern industry of farming, farming is for a commercial surplus. The total national farm income is made up of all the products of the farms in the United States for a given farm year. This aggregate is then divided into two portions, a minor portion of which is consumed or retained on the farm in the maintenance of life, labor, buildings, implements, machinery, and soil. The other greater portion constitutes the surplus products of the farm, and these are the portions that enter into the market.

The farm market may be considered either in its most local sense, as a village store where smaller portions of the farm surplus are frequently exchanged for the needs of the family; or it may be regarded, in the second place, as the more or less distant center of consumption, as in the case of city markets to which products are forwarded by wagon or by rail either from the farms directly or through local buyers who collect, grade, and pack the products for more distant shipment. In the third place, the farm market is identical with the world market and the distance between the farm and the place of consumption may be as far apart as San Francisco is from Liverpool. The local market, the city market, and the foreign market are the three concentric circles of distribution which have grown up with the progress of the country. Each of these markets has its own influence in farm prices.

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ducer of corn in the Central West ten or more years ago. But his outlook does not end there. While others were seeking a wider market for surplus corn the farmer took to stock feeding and converted the corn into pork and beef at a greatly enhanced value over the market price for this cereal, to say nothing of the by-products of such conversion. A similar change in the cotton-growing economy has come through the commercial use of cotton seed, but a still greater gain to farm value of products has been made in the rise of cotton mills nearer to the sources of the raw material. The system of distribution of our cereals will not have reached its legitimate development until every farm product shall have found a higher value in a market nearer home than the foreign market is paying for it. Apart from the effect of protective laws in raising the level of farm prices at home above that paid abroad, the distribution of raw materials is always more expensive than that of the products derived from them. Dairying is possibly the best illustration of this principle of concentrating values of farm products before they enter the distributive process from producer to consumer. It seldom pays to ship butter from New England to Old England because the price received at home is so high that shippers can not make any profit on it by exporting.

Surplus distribution, it is evident, has changed greatly in the course of a century. More and more the farm becomes a converter of simple natural values into higher commercial values before the actual process of distribution begins. The farm and the farm surplus change with the demands of the consumer. The rise of the speculative distributer is proof that the farmer has not found himself capable of discharging this distributive function.

10. THE DISTRIBUTIVE FUNCTION OF SPECULATION.

Why has commercial distribution in the United States become so largely identified with a speculative class of trading capitalists? The answer is, that it has been found best for the producing and the consuming interests of the community that the risks of distribution should be localized in a separate commercial class whose members are in a position to inform themselves as to all the factors, past, present, and prospective, affecting the future course of prices. If the risks of distribution fell upon the farmer, it would increase materially the risks of capital required and thus raise the rate of interest he should have to pay as producer, because increased risks always raise the rate of interest. This would increase the cost of production and consequently tend to reduce consumption by rise of price to consumers. Such rise of price beyond a certain point would reduce the volume of trade. If consumers assumed the risks of distribution there would be very inadequate provision for the future. Irregular supply of subsistence soon breaks down the economic efficiency of consumers, besides impairing their regular consuming capacity as customers of the producer. Hence the community—producers, traders, and consumers—all suffer together. Regularity in supply of the means of subsistence is a great desideratum in economic welfare, but it is so automatic a process that we really do not notice how it is accomplished. The work is done through the medium of a market price; a higher price brings forth more, a lower price brings forth less. Now it is the speculator who has to decide in advance on the price at which a regular supply will in all probability be forthcoming from producers in sufficient quantity to meet the regular requirements of the consumer. One speculator might place the future market price too high, another too low, but as a class they correct and check one another. It is to their interest as distributers to call forth all that the consumer will take, and no more. Speculators as a class are, therefore, interested primarily in a correct judgment, as much so as is either the producer or the consumer of the product in which the trader speculates. If, for instance, the Liverpool wheat speculators should, through an error of judgment or calculation, set the price of May wheat 10 cents below the correct world price, the surplus stock would meanwhile be disturbed elsewhere until the shortage in the Liverpool supply became evident from a rise in the price paid by consumers. This would bring some of the misdirected shipments to Liverpool, but not so much as if the blunder had not been made in the beginning; other places, whose speculators more correctly anticipated future prices, would supply themselves more fully than usual. Thus the volume of trade at Liverpool would be reduced by a valuation too low to bring an adequate supply; the consumer's customary demand would be inadequately supplied at the undervalued price, and the total expenses of distribution increased by the defective judgment of the speculator.

These two kinds of services are peculiar to speculative distribution—the services of assuming the risks that arise from changes in the relation of demand and supply, and the services of giving the right direction to the commodities available for consumption. Even in famine-stricken India the Government regards speculative distribution of supplies as on the whole far more efficient than any bureaucratic distribution could be. Without this, modern markets would be deprived of a very great share of their efficiency in serving producers and consumers. In fact, those who have thought out the subject most thoroughly have found in this directive work of speculation the chief justification for its existence. Where government has assumed even part of the risks of crop distribution, as in Russia, piles of wheat rot in one section while people starve in the next.

"The central feature," says Professor Emery, "in the economic organization of modern society is the market. From the point of view of the individual the production and distribution of commodities are carried on with a view to their exchange. The regulator of exchange, and therefore of production, is value. Consequently the producer will expend his energies on such commodities as will have the greatest market value as compared with the expenses of production, just as the merchant will take them to the market where they will command the highest price. But this adjustment of production and distribution according to values will be accurate only when he thinks he can get a return greater than his outlay. The merchant buys only when he thinks he can sell at a higher price. In both cases there is always the risk that before the production is completed or the sale made the value of the commodity may fall. Similarly, there is a chance that it may rise. In the one case there is a loss, in the other a gain, to the producer or the merchant. Hence it may fairly be said that the test of the perfection of the organization of trade is the promptness with which such changes are learned and the accuracy with which they are predicted. It is by a due appreciation of this fact that one comes to a realization of the importance of organized speculation. If it is found to be the means of making the needed prediction, it will also prove itself the chief directive influence in the economic field in which it prevails."[1]

Speculative dealings in farm products have then these three facts to consider: The distance between producer and consumer, concentration and distribution of surplus crops at the right times and places, and the formation of a business judgment based on the ratio of the visible supply of the world's grain and cotton, for example, to the customary demand of its consuming communities. The scope of this task of forming a judgment upon world-wide conditions, and forming it accurately enough to stake millions of capital upon it, is perhaps the heaviest hazard in our whole modern economic organization of society. But some class of investors must do it, or consumers must pay a higher price for their product, and producers must be content to enter the market with fewer competitors ready to buy and carry their surplus. Producers and consumers together, without the speculative mechanism at work, would have to divide the risks of distribution between them. Neither of these interests is prepared to do this. Sound commercial policy is the best served by a rational division of distributive labor, in which economic freedom and economic responsibility are equally respected.

The economic services of speculative agencies engaged in distributing farm products are threefold:

1. They localize industrial risks among a commercial class whose special function it is to distribute surplus supplies over deficit times and places in such a way as to lessen the uncertainty of producers and consumers.
2. They relieve producers and consumers from carrying a whole year's stock, enabling the former to convert his crop promptly into cash capital and the latter to supply himself as his periodical needs may require without enhancing prices beyond the ordinary rate of risks and returns of such capital investments.
3. Competition of speculative dealers tends more than any other force to reduce profits of these agencies to a minimum per unit of commodity handled. Released from other economic functions, it is to their interest to seek to reduce the risks of distribution to a minimum. By expert acquaintance with the conditions that involve risks the hazardous elements are gradually limited if not entirely eliminated.

II. WHAT MAKES FARM PRICES.

By farm prices is here meant the net value of farm products to the producer upon delivery at the local market. When the farmer has shipped to a distant market, the net price is the price at the destination less cost of shipping and other charges incident to placing his products upon the distant market. Farm prices are, therefore, the lowest prices for farm products. Everybody else pays more than the farmer receives. Between the farmer and the wholesale market the local buyer generally intervenes. The price which the local buyer pays rises or falls with the demand in the wholesale centers to which the local buyer ships his supplies. The local buyer receives his prices from the wholesale centers through the dealers or commission men. The price to be paid the producer in the country for a given day is determined by the trade interests in the large receiving centers on the basis of commercial conditions. They act either individually or collectively in sending out their quotations to local buyers, stating the prices at which they are willing to receive products of the character in which they deal.

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[1] H. C. Emery, Speculation on Stock and Produce Exchanges of the United States, pp. 101-2.

The question whether dealers in such distributing centers act individually as firms or collectively as the representatives of the market taken as a whole at that place depends upon conditions which are constantly changing. Different dealers in farm products of the same kind have different classes of customers and handle different grades of products. Under such circumstances it is evident that the motive for combination to control prices may be entirely wanting. The distinctively wholesale trade has always some such division of labor by which different firms confine themselves more or less to specific features of the trade. Wherever this is the case a combination to fix prices in general for a great variety of kinds and grades on farm products is practically out of the question. On the other hand, where a comparatively small number of traders handle the receipts from a given territory and are likely to come into competition one with another it is a fact that an understanding is frequently arrived at by which a price is fixed.

Of course no such understanding can be inflexible, because a failure to call forth a sufficient supply from farmers at a given price would result in the loss of customers supplied by the wholesale trade of a given city. If, for example, a Pittsburg dealer in poultry is party to an understanding not to pay more than 11 cents per dozen for West Virginia eggs, and that price fails to bring to the Pittsburg market enough for him to supply the retailers whom he regularly furnishes with eggs in 25 towns in western Pennsylvania, it is evident that he must either raise the price, in spite of the understanding with his fellow-dealers, or must go into a territory, such as eastern Ohio, where the farm price of eggs is considerably higher than in West Virginia. Hence, though a temporary understanding may exist to prevent competition within a given area on the part of the wholesale trade for supplies, all such understandings must be based upon the capacity of the price to command a sufficient supply to enable each wholesale dealer to hold his retail customers; otherwise the retailer would be obliged to turn to other wholesale dealers with whom he is apt to establish trade relations of such a character as to gradually displace or actively compete with the house on which he had previously depended for his regular supplies. The maintenance of trade relations between wholesale and retail dealers rests very largely on regularity of supply and fair treatment in the matter of prices.

Another fact makes it practically impossible for any important center of distribution to depress farm prices. Even the wholesale dealer who depends on the daily rural supply to meet the demand of the retail trade is obliged to take into account the prices which other receiving centers are paying for the same products. The price at Pittsburg can not be much lower, if any lower, than the price at Cincinnati in the territory where the two cities compete, nor can the Cincinnati price be for any length of time out of line with that of St. Louis or Chicago, or with prices at the Atlantic seaboard markets. By no possible arrangement can the wholesale trade in any one of these centers depress farm prices for any length of time much below what the other centers are willing to pay, beyond a slight advantage in freight rates which one may have over the others, and the competition of these markets in equidistant territory is usually so active as to bring about practically equivalent freight rates from the farmer's shipping point to the competing markets. In fact, the greatest force in the distributive system making for reduction of distributing expenses of handling farm products is the competition of the wholesale markets in large distributing centers for the products of the farm originating in the territory from which two or more cities draw their daily supplies. A lower or a higher price in one of these markets than is offered in any other turns the tide in the direction of the other and practically eliminates the supply from the former market. A wholesale market which keeps itself out of line with other markets simply takes its own life by attempting to maintain an unduly low farm price. As a rule, then, it may be said that the necessities of the retail trade for a regular supply from wholesale centers and the competition among wholesale cities for a regular supply from productive areas make it practically impossible for any single market to operate a combination to depress farm prices much below the level which the relations of supply and demand justify. Although it may be true that a temporary depression of prices through combination occasionally occurs, it is equally true that in nine cases out of ten a decline in prices arises from an undue increase in production or an undue decrease in consumption. Of course the wholesale trade is bent upon getting what it needs at the lowest possible price consistent with good quality. The wholesaler is not concerned with the question whether the producer is doing a losing business. In a conference between the milk producers supplying New York City and the New York Milk Exchange, which distributes a very large proportion of the milk consumed in that city, the producing interests attempted to explain that they were losing money in supplying milk to the exchange at 2 cents per quart. The Milk Exchange replied that at that price it could get all the milk that was necessary to supply its customers and that the question of whether the farmers of the five States lying around New York City could furnish milk at that price was not a question for the consideration of the distributer. The position of the distributer is always experimental. If, at a given farm price, a sufficient supply is forthcoming, the experiment is a success. If much less than a sufficient supply or much more than a sufficient supply is forthcoming at that price, then the experiment is a failure, because the deficiency in the one case results in the failure to supply the demand of consumers, and the surplus in the other case deteriorates in quality, decreases the profits of the distributer, or, where the milk is disposed of at its butter value, as in Boston, still further depresses the prices to the producer.

The conclusions here arrived at apply especially to poultry, eggs, and dairy products generally. They amount substantially to this, that under existing conditions farm prices for these products are not determined by the combination of dealers in distributing centers, but are determined rather by the competition of distributing centers in their efforts to furnish a regular supply to the retail trade. There are features in the organization of the trade in these products which influence the level of farm prices in the course of the year. One of these is the more compact organization of dealers into exchanges. The other feature is the influence of cold storage upon the prices of dairy products, poultry, and eggs. The organized exchange tends to develop a solidarity of trade interests often overlooked in the attempt to explain prices. Such a development of common interests does much toward steadying the course of prices from day to day. It aids in the exclusion of elements of speculative ventures within the range of this particular trade, and, most valuable of all results, it gives rise to a body of rules and regulations which facilitates the process of distribution from producer to consumer. All these services are of more or less value to productive interests and, therefore, are not to be overlooked in considering the influences in trade organization upon farm prices.

There is much misapprehension on the exact function of commercial organization in the formation of prices. The best way to make clear how a group of organized wholesale traders in these products of the farm influences farm prices is to describe the operations of a representative exchange. In a city of the Central States which receives largely from Southern and Southwestern territory and distributes extensively to Eastern and Northern markets, a group of from ten to twenty wholesale dealers and commission merchants gathers every business day about 10 o'clock at a table reserved for their use in one corner of the floor of the chamber of commerce. While all staple farm products are bought and sold here by sample or otherwise, the group is concerned only with dairy products, poultry, and eggs. Before them on a blackboard are placed the prices which prevailed in New York, St. Louis, Pittsburg, and Chicago on the previous day. On the same board is recorded the quantity of the products received, shipped, and on hand at these points. In addition to these are given figures of the export and import trade in these commodities. Any important changes in the weather in the territory from which supplies are received is noted and likewise recorded. If receipts are bought for storage or for distribution to consumers, the fact is reported as a feature affecting the course of prices. This comprises one set of facts of which the organized trade must first make itself master in order to understand the general situation. These facts are, of course, obtained daily by telegraph for the use of the trade.

The members of this little group bring to this gathering any factor of more particular importance to them; that is, their knowledge of the state of their own trade in this particular market and in the outlying consuming centers which are more immediately dependent upon this city for their supplies. Every large distributing center must be relied upon daily to supply in many cases hundreds of small towns in which retailers dispose of their small stock to household consumers. Their facilities for keeping supplies do not exceed the demand of a day or two at the utmost. Consequently these outlying towns are closely dependent upon the distributing centers to which they are naturally tributary. These are the two features of the situation which the group of wholesale dealers is obliged to take into account. With the knowledge of the prices in half a dozen competing centers of distribution, together with the knowledge of the conditions of trade among their own retail customers lying within a radius of 100 or 200 miles, this group of dealers is prepared to say whether the price of the previous day is to be marked up or down in order to balance the demand and the supply. If the price which has ruled for eggs during the past week has resulted in bringing to the market a larger quantity than can be disposed of, a "mark-down" in their prices is the natural remedy. The Butter and Egg Board in Chicago in June last received as a result of an increased price an unduly large proportion of "dirties" at a time when the price for superior eggs for cold-storage stock was as high as 11¾ cents. The high price had resulted in the marketing of an inferior grade of eggs, and the only defense of the trade was to mark down that grade of eggs. Armed with such information as to the quantity of farm products that is wanted by consumers and the grade of each particular product that is in high or low demand, such a body of dealers enters upon the problem of the prices that the state of the market will justify them to offer to local shippers in the hundreds of rural localities from which the supply is drawn. The basis of these prices is practically always determined by the progress of consumption in the last stage of distribution. The wholesale trade renders no more valuable service than that of determining day by day just how much and when and what kinds of farm product the consuming world, which depends upon it, will take at a given price. Between this price and the farm price there must be sufficient difference to move the product from the producing farm to the consuming family. This difference is competed for by three classes of distributers. The degree of competition entering into distribution is such that no form of capital or labor can for any length of time, under ordinary conditions, arrogate to itself an unduly large percentage of profit; and, as a rule, where extraordinary profits are made they are results of extraordinary enterprise on the part of the distributer or an extraordinary value in the quality of the product. The best grades of product compete least in their passage from producer to consumer; the worst grades compete most; hence extraordinary profits are made neither on intermediate nor on lower grades of farm products, but on such grades as command extraordinary prices from consumers, who, above all things, insist upon the highest quality. It ought to be apparent from this analysis that a combination of wholesale dealers to depress farm prices permanently, or even occasionally for any length of time, or to unduly raise prices to the retail trade for any considerable period, would result in the elimination of such traders from the market. It is almost universally true in distribution that where capital and enterprise are free to enter the market it is practically impossible for any combination in any particular market in these commodities to assume the risks of depressing farm prices below the level which other markets are willing to pay.

The increase of cold-storage facilities in large and small cities has had a very perceptible influence upon the level of farm prices for butter, poultry, and eggs. It has the effect of supplementing the ordinary demand when supply is larger than demand for consumption, and of supplementing the ordinary supply when demand is larger than that supply. In short, it tends to increased stability in prices to producers and consumers. Farm prices are made in the terminal or central markets by those who are acquainted with the present and prospective conditions of supply and demand. The consumer's price remaining constant, if they offer less than will bring forth an adequate supply they lose trade; if they offer more than will bring forth an adequate supply they lose profit. Now, the only price that will not call forth an adequate supply is the one that is less than the cost of production. The net cost of production of an adequate supply is the main factor in determining farm prices.

12. WHAT MAKES WHOLESALE MARKET PRICES.

Prices of farm products are to be viewed from three standpoints in the inquiry here being made: That of farm prices, in which the producer is directly interested; that of wholesale market prices, with which the speculative trade is primarily concerned; and, thirdly, that of retail prices, in which the consumer is chiefly interested. The question of what makes farm prices has already been considered. We found that they were determined normally by the net cost of producing an adequate supply. In other words, farm prices are determined by the cost of production by the least capable employers of capital, labor, and land required to produce the necessary supply. But this is not the market price. What, then, determines that? We answer: The speculative dealer, within certain limits set by the interests, primarily, of the consumer and secondarily of the producer. The wholesale market price is primarily determined by the relation of the visible supply to the consuming capacity of the community, country, or countries concerned.

Market price in the wholesale trade varies with the time and place, quantity and quality. It is the business of buyers and sellers in any market to know just what is the price at any particular time at which consumers will relieve the market of that quantity before additional supplies are received. That price we may define as the price which suffices to distribute the existing supply most advantageously to the seller, among consumers whose demands are most urgent, pending the arrival of fresh supplies from the source of production. Hence this price is determined largely by the state of the visible supply. Now, the wholesale market tends to evolve this particular price proper to the time and place with conditions then and there prevailing. On the basis of this price the producer plans his outlay of labor and capital; and on this basis the retailer handles goods or holds off from the market. When the price is too low for any length of time to pay the producer, he simply diverts his enterprise to other channels, at much loss, however; when it is too high the retailer handles little or none, and so leaves his capital lie idle for the time being. Lastly, consumers withdraw from the market until the proper price is reached at which the wholesale market can meet the measure of demand which the mass of consumers at a proper price are prepared to make.

The function of the speculator in the wholesale market is often misrepresented, but the determination of this particular price, which serves as a basis for production and retail distribution, and thus for consumptive demand, is not the least of the economic services he renders to producers and consumers. This "proper" price, as it has been called, is, however, primarily made in the interest of the consumer rather than of the producer. The consumer's demand is the primary factor in determining the speculator's course of action. Ten carloads of strawberries from the South arrive in a Northern market on a given evening. They are sold at auction at midnight to a speculator. The upper limit of what he can afford to pay is measured by the price at which consumers will take them from the retail trade before fresh supplies arrive. Suppose that is 10 cents a quart. The lower limit of his price is measured by the desire to attract more berries to the market from producers. Too low a price will not call forth a supply at that market. But the main thing is to get the consumer to relieve the market of these berries. The producer must market his crop, but the consumer is free to refuse to buy. Hence it is the consumer's interest that is most nearly identical with that of the speculator.

This is the way market price is arrived at day by day. It is the price that just succeeds in distributing the visible supply among consumers. If the price rises beyond this point consumption is checked, stocks accumulate, and a fall of price is necessitated, to the loss of all dealers who have purchased above the depressed rate; while, on the other hand, if the price falls below it the result is an advance at a future time, to the loss of all who had sold while the low price prevailed. It is evident, therefore, that dealers are interested in knowing the "proper price" of the market; and, further, it is evident that it is toward this point that the combined efforts of the buyer and seller, in proportion as they are well informed respecting the conditions of supply and demand, really converge.[1]

13. WHEAT MAKES THE PRICE OF FARM PRODUCTS TO CONSUMERS.

The value of farm products to the consumer must, in the long run, be high enough to cover (1) the expenses of distribution and (2) the cost of production. In theoretical enonomics it is customary to regard both of these factors as included in cost of production, but in actual practice they are incurred by two very different economic agencies. In the comparison of the relative worth of the services of distributer and producer to society we have to consider them separately. The estimate of the consumer is what gives value to the surplus products of the farm. The greater the volume of these products put on the market, the lower the value which consumers as a class put upon each unit of product. This lower value brings the product within the reach of a larger consuming class without increasing the value to the producer. In fact, the effect of an increased volume tends generally to decrease the value per unit of product and to increase the cost of production. This decrease in the market value of the product can go on until it falls below the farmer's cost of production. Then the acreage will begin to shrink until a rise in market prices brings it back into cultivation again in order to satisfy the demand of the consumer. In other words, the value of a product to the consumer depends on the utility of that product to him; the producer's estimate of value depends on the outlay he has to make—that is, the expenses of production.

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[1] Cairnes, Political Economy, ch. iv, § 4.

The consumer's estimate and the producer's expenses mark the limits above and below which prices for farm products can not normally go. A normal price always lies within these limits. If the price goes above the consumer's estimate of its value, demand falls off; if the price goes below expenses of producing, supply decreases. In either case the price would be abnormally high or abnormally low. The latter has no doubt been the case with many farmers not enjoying the best advantages of soil and location during the decline in prices from 1873 to 1896—that is, they produced at an actual loss.

Production at abnormally low price to consumer, as compared with productive outlay, has been the rule throughout this period in nearly all of the least favored localities, owing to competition with the most favored productive localities. As long, therefore, as there was highly productive free land available in the West, the expenses of production on these most distant lands were the main factor in determining the price of farm products. These favored lands furnished the bulk of the surplus crops, and the surplus crop controlled the market. The price paid by the consumer under these conditions of surplus supply was determined by that preponderant portion of the necessary supply which was produced at the least cost of production or greatest advantage on the cheap and fertile lands opened since 1873.

It might be inferred from this that, as the fertile lands in question have been pretty well taken up, and as this cost of production has presumably increased, the price of wheat, for example, should recover permanently from the low level which prevailed while the wheat area was undergoing expansion by bringing new lands under cultivation. But there are certain influences in the world market to which our surplus wheat goes that prevent rapid recovery of depressed prices.

14. WHY WHEAT PRICES STAY LOW.

In such sections of the country as the Pacific States of Oregon and Washington the main products are wheat, oats, hay, hops, prunes, apples, cattle, sheep, hogs, wool, and dairy products. The conditions there are simply these: The home consuming population is comparatively small, and the surplus wheat, for example, has to be sent to centers of consumption as remote as 17,000 miles from the producer.

The market price of Columbia River wheat, like that of our surplus wheat generally, is fixed by the deficiency in the foreign supply from domestic sources of each country. All deficit countries go into the world market to get a portion of the surplus from such countries as have wheat to spare. If the deficit countries together have a large shortage they become all the more active bidders for the world's surplus wheat. If that surplus is less than usual the bidding is all the more active. Whether prices for American wheat are higher or lower depends altogether on such things as are beyond our own control at the time. A large European deficit and a large American surplus may not raise prices at all. A small European deficit and a small American surplus may likewise leave prices where they have been. Only in those years when it happens that there is a shortage in deficit countries large enough to create an extraordinary demand for our surplus do our prices really show much rise.

Whenever this coincidence of a foreign shortage equal to our surplus occurs it first shows itself in farm prices. The rise of farm prices induces producers to increase the acreage. If a favorable crop year ensues the world over, the surplus is in excess of the usual demands of deficit countries. If the crop year is not favorable the increase of acreage in the United States may still be large enough to increase the surplus supply considerably beyond the average deficit demand; consequently farm prices remain low if they do not fall still lower than before. Such increase in wheat acreage has occurred in the South and the Southwest during the wheat year just closed, in immediate response to the rise of wheat prices during 1898 and 1899.

The statement that farm prices of wheat depend on the extent of the deficiency in the crops of importing countries, must therefore be modified by a few considerations which this statement seems to overlook.

1. The capacity of a deficit country to take our surplus depends on the purchasing power of the consumers of that country. If industry of various kinds is depressed there to such an extent as to leave a considerable proportion of consumers unemployed, then the purchasing power of that country on the part of these consumers is very much reduced; consequently, this inability of a considerable class of consumers to buy, has the same effect as the loss of a part of our market in that country.

2. A second factor in the temporary reduction of demand on the part of importing countries is the capacity of consumers of such countries to find substitutes for cereal food supplies other than wheat. Vegetables of local production, and even the cheaper meats, at times succeed in effectually displacing a certain portion of a previously existing demand for wheat and wheat flour.

3. A deficit in the wheat crop of India does not open a correspondingly large demand for wheat for consumption in that country, because these people, as a rule, find wheat too dear for their daily consumption. The famine now prevailing there is not so much a famine in wheat as it is in the inferior grains which are successful substitutes for wheat.

It is evident that these are conditions which limit the theory that a deficit of the wheat crop in other countries than our own is to be credited without discount to the improvement of our wheat-market prospects in the countries which for the time being have a deficiency in a domestic supply. Our wheat market is no doubt capable of development within recognized limits, but the recognition of these limitations will help the producer to appreciate his position under a reign of low prices. Whether he can afford to wait for the development of markets for his surplus in foreign countries, is a question for each producer to decide for himself. And the form of the question is simply this: Whether, at existing prices, it is reasonable to expect to make as much net profit on the total farm investment of labor and capital on this single line of cereal farming as we might expect to derive from an equivalent outlay of capital and labor on land devoted to a greater variety of products, in which grain for commercial purposes figured as one among several other sources of income.

The solution of such a problem may require a few years of experimentation after a study of the experience of other producers and of the market for contemplated substitutes for the single cereal crop. Usually this experimenting does not begin until low prices force upon the producer the alternative of breaking with his traditional farm policy or becoming a bankrupt. At that juncture his capital is sometimes too meager to make successfully experiments on new lines of productive outlays. The departure from grain growing as the main farming in the middle West during the past decade, and the development of dairying as a substitute, or rather as a supplementary use of economic resources, was a solution of the question of how to meet the low prices of grain. The fattening of cattle under high prices of meat is but another solution of the same problem of adjustment of production to the demands of consumption by following the line of better prices.

PART SECOND.

THE DISTRIBUTION OF CEREALS.

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I.—GENERAL SURVEY OF THE CEREAL SITUATION.

1. PRODUCTIVE AREA OF SURPLUS CEREALS.

The distributive movement of cereals is one of stupendous scope and volume. Every year we have a little less than 90,000,000 tons of grain to be disposed of.[1] If one-third of this remain on the farm, the other two-thirds are turned into the channels of commerce for internal and foreign distribution; that is, 60,000,000 tons of traffic come alone from the surplus grain of the American farm. If one-third of this is hauled 1,000 miles, it gives 20 billion ton-miles of traffic. If the other two-thirds are transported on an average of 250 miles, we have a ton-mileage of 10 billion more. In other words, the grain ton-mileage of 30 billion tons equals 32 per cent of the annual average railway ton-mileage of the United States for the five years 1894–1898.[2] On this basis for calculation a third of the railway traffic is grain business. The cereal trade is the sap of economic life to the railroads.

The surplus cereal area of the United States comprises an economic empire in itself. We get an idea of its dimensions by placing one point of the compass at Duluth as the center and the other point at Buffalo; with this radius we make a southern and western sweep which incloses a semicircle of twelve cereal States unmatched by any other in the world.[3] Their relative importance as productive areas is further emphasized by the fact that over 25 out of 35 hundred million bushels of cereals, or over 71 per cent, are produced within these twelve States.

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[1] This assumes that each bushel of grain averages 50 pounds, taking the five cereals into account.

[2] Interstate Commerce Commission, Railway Statistics, 1898, p. 67. The same authority for the year ending June 30, 1899, gives the total grain tonnage for that year as 59,051,253 tons.

[3] This group includes Ohio, Michigan, Indiana, Illinois, Wisconsin, Minnesota, Iowa, Missouri, Kansas, Nebraska, South Dakota, and North Dakota. Pennsylvania is in some years a surplus wheat State.

The five leading cereals of the United States, in the order of their productive importance, are corn, oats, wheat, barley, and rye. Together they have reached the total of 3,500 millions of bushels, in round numbers (1899). The world's wheat crop averages about 2,500 millions. Without hesitation we may regard the United States as the foremost country of the world as a producer, consumer, and distributer of cereal products. In fact, the United States is the only country to which the rest of the world can look with any degree of certainty for a cereal surplus. The amount available varies, of course, but a certain surplus is always available here, while other countries are able to furnish nothing one year and a large surplus next year to supply Europe's deficit. Argentina, for instance, is reasonably certain of a large surplus in only two out of every three harvests, or possibly only three out of every five harvests.

This position of America's cereal area gives the United States a commercial advantage which none of her cereal competitors enjoys. The uncertainties of climate are not so great here as in European grain countries. The extent of our cereal areas is so much vaster than those of Europe, excluding Russia, that a loss of crop by a generally unfavorable season there would simply amount to a local failure of the crop here. European farming is not alone open to such considerations as climatic uncertainties. There the cereal area, whether it expands or contracts, does so at the risk of a diminishing return to labor and capital, because each extension of area or intension of cultivation increases its cost per unit of product.

A comparison of our cereal section with the rest of the United States shows that from about one-half to about three-fourths of the acreage, the production, and the farm value of the entire country is found within this territory.

Ratio of cereal crops of twelve surplus States to the total for the United States.[1]

	Acreage in 12 States (million acres).	Per cent of United States acreage.	Production in 12 States (million bushels).	Percentage of United States production.	Farm value of cereals in 12 States (million dollars).	Percentage of value to total crop value.
Corn	48.6	59.2	1,485.1	71.4	385.3	61.2
Wheat	29.9	67.2	347.6	54.3	149.6	46.8
Oats	18.6	70.9	616.7	77.4	137.1	69.2
Barley	1.7	58.1	42.3	58.3	14	47.5
Rye	.81	50.6	12.5	52.2	5.6	46

[1] Based on advance figures of 1899, United States Department of Agriculture, Division of Statistics.

2. ORGANIZATION AND EFFECTS OF CEREAL MOVEMENTS.

Of primary importance in its economic bearing is the fact of the organization of agencies for distribution of cereals in the United States. In this respect these commonwealths are commercially unique. These States have not only the natural outlets of the lakes eastward and of the Mississippi and its tributaries southward, but they have also the most fully equipped system of land transportation known to the world in the railroads centering on the lakes and rivers. These water routes and rail routes are complemental agencies as well as competitive. By the railroads the surplus is concentrated at the primary markets from the farms for future distribution; by the lakes and rivers the movement of distribution to internal and foreign centers of consumption is controlled; so that the water and railway systems mutually complement and control each other in handling this surplus between productive areas and consuming centers. This is a fundamental feature in the internal organization of the cereal trade of this territory and of the United States generally.

The economic relation of these surplus States to the rest of the United States is further noteworthy. Practically all other States South and East rely upon these States for what is required to supplement their own cereal needs in the course of the year. The twenty-two deficit States are consuming States in relation to these twelve surplus States, quite as much so as is Great Britain and the Continent. This regularly available surplus affects the farm policy of the Atlantic coast in quite the same way as it does that of England and Ireland; that is, it obliges them to quit producing cereals at a certain limit of diminishing return to labor and capital and to substitute some other form of product less exposed to competition from this direction. Hence the very supremacy of these cereal States in the

American market has forced diversification in farm industry upon widely different localities, both at home and abroad. Where such diversification has not wholly abandoned grain farming it has driven it from the extensive to the more intensive methods of cereal culture, and so raised the yield per acre in the East to a level of, if not above, that of the West[1] New Jersey, for instance, now produces "more wheat to the acre than any Western State."[1]

No influence in our national commerce has so stimulated the Southern and Eastern farmer to improvement in methods and organization of farm economy as this movement of surplus grain has. It is not too much to say that this movement has revolutionized more than one-half of our national agriculture.

3. CEREAL DISTRIBUTION, INTERNAL AND FOREIGN.

The volume of the movement in question is but one of its main features. The proportion consumed on the farm and distributed within the country compared with what is sent abroad is also significant, as shown in the following table, covering the six years 1894-1899:

Proportion of cereal crops exported and domestically consumed.

Year.	Production.[a]	Exported.[b]	Domestically distributed and consumed.	Used domestically.
	Bushels.	*Bushels.*	*Bushels.*	*Per cent.*
1894	2,423,202,476	240,808,462	2,182,394,014	90
1895	3,557,967,508	149,217,023	3,408,750,485	90
1896	3,587,970,185	248,118,190	3,339,851,995	93
1897	3,226,032,361	385,728,645	2,840,303,716	88
1898	3,411,689,787	521,869,884	2,889,819,903	81
1899	[c]3,518,968,796	[d]462,876,887	3,056,091,909	84

[a] Year Book, 1898, pp. 678-679.
[b] Distribution of Agricultural Products, pp. 114-122.
[c] U. S. Dept. of Agriculture, Division of Statistics, 1899.
[d] Summary of Finance and Commerce, pp. 1843-1844, 1899.

Our cereal crop has increased nearly one-half since 1894; of this we have used domestically from 84 to 93 per cent and exported the balance. The exported proportion never has gone beyond 16 per cent of the yield. Hence our home consumption of cereals is over six times as important as is our foreign trade. But our foreign export has nearly doubled since 1894, when it was 241,000,000 bushels; now it is 463,000,000 bushels. In 1898 it was 522,000,000 bushels, a gain of 48 per cent. After all, then, the internal commerce of the United States in cereals is the main feature of the nation's commercial distribution.

The surplus cereal movement within the United States takes three main directions of distribution: (1) Toward the Atlantic slope and to its seaboard cities for consumption and export; (2) toward the Gulf ports for export mainly; and (3) toward the Pacific ports mainly for foreign distribution.

4. THE WHEAT MOVEMENT IN THE WORLD'S MARKET.

In the course of each year the wheat crop of the United States is divided into three main allotments. The farmer keeps one-third for consumption on the farm and for seed. The rest of the country consumes another third. The last third goes into the world's surplus to supply countries which do not produce as much as they consume.[2] These proportions hold true in the long run, though for any given year we may spare more or less than this. Of the crop of 1895, for example, we exported only 27 per cent, and two years later almost 41 per cent. The tendency is rather to increase than to decrease the proportion of one-third. This is due to two main causes, likely to be temporary: First, the newer surplus-wheat countries south of the equator have not in recent years maintained their competitive importance in the world's wheat market; and secondly, a series of growing European deficits in wheat, occasioned by bad crops, has had a corresponding influence upon the price. This in turn expanded our wheat acreage to the high-water mark in our agricultural history—44,592,516 acres in 1899.

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[1] Industrial Commission, Agriculture, p. 93.
[2] "The Wheat Movement," in McClure's Magazine, 1899.

The disposition of the annual wheat crop for a series of 5 years is shown in the following table:

Disposition of the wheat crop of the United States, by amounts and percentages.

	1894.	1895.	1896.	1897.	1898.
Wheat crop ....bushels..	460,267,000	467,103,000	427,684,000	530,149,000	675,149,000
Stock in farmers' hands March 1 following year ....bushels..	74,999,790	123,045,290	*a* 88,149,072	121,320,500	*b* 198,056,496
Per cent of total in farmers' hands	16.2	26.3	20.6	22.9	29.3
Consumed in county where grown ....bushels..	202,364,000	193,742,240	*a* 206,458,269	261,223,218	*b* 276,266,573
Per cent of total crop consumed in county..........................	43.9	41.5	48.3	49.3	40.9
Shipped out of county where grown ....bushels..	257,903,000	273,360,760	*a* 221,226,077	269,125,950	*b* 398,882,132
Total exports of wheat and wheat flour to July 1 of year following..........bushels..	*c* 144,812,718	*c* 126,443,968	*c* 145,124,972	*c* 217,306,005	222,618,410
Per cent of total crop thus exported	31.4	27.6	33.9	40.8	32.9

a Agricultural Year Book, 1896, p. 563.
b Agricultural Year Book, 1898, p. 682.
c New York Produce Exchange, 1898–99, p. 37. Wheat flour reduced to equivalents in wheat.

The economic functions of the wheat crop are as far-reaching as they are fundamental in their importance, both in domestic industry and foreign commerce.

In the first place, one-third of the country's wheat crop is retained as working capital required for farm operations. The other two-thirds represent the command of wheat farmers over the products of other industries. Of these two-thirds one is required for the bread of the nonrural portion of the people of the nation; the other third is credited to the nation's commercial account with other nations. Not only agricultural but domestic industry and foreign trade are vitally bound up with the action of wheat upon the whole range of modern enterprise. And in these fields of enterprise it is the wheat-eating peoples who, as a matter of history, have made the most of their economic opportunities.

In the second place, wheat is an economic index of our international purchasing power. Though the estimated farm value of wheat in 1899 was just half of that of corn, and though we now send abroad as a rule a greater quantity of corn than we do of wheat, nevertheless the export value of wheat and wheat flour for the years 1894–1898 averaged just three times that of corn and corn meal, the next crop in commercial importance.[1] While, therefore, the five leading cereals might better be taken as the real measure of the commercial strength of agriculture, our commercial importance in the world market is measured by the ratio of our surplus wheat to the total foreign deficit in that commodity.

This fact makes necessary an analysis of the world's wheat valuation as the key to the commercial position of American agriculture.

5. THE WORLD'S WHEAT SITUATION.

The degree of exchange power which the wheat crop gives to the United States among commercial nations is quite exactly measurable. The world's wheat crop averages now in round numbers 2,500,000,000 bushels. In 1898 the yield was nearer 3,000,000,000 bushels, or less than half a billion above the average. In exact figures this crop was 2,879,923,000 bushels.

There are certain conditions in the world's wheat situation which help to explain why so low a level of prices prevails for American wheat in foreign markets, as a rule. These conditions include the distant separation of surplus countries from deficit countries, the largeness and regularity of the American surplus in proportion to the world's surplus, the fact that harvests over most of the world occur during 3 months near the middle of the year, and the fact that the world's demand for surplus wheat is met week by week throughout the course of the year.

Under these conditions the central problem in the distribution of surplus farm products lies in moving about 400,000,000 bushels of wheat (strictly 387,000,000

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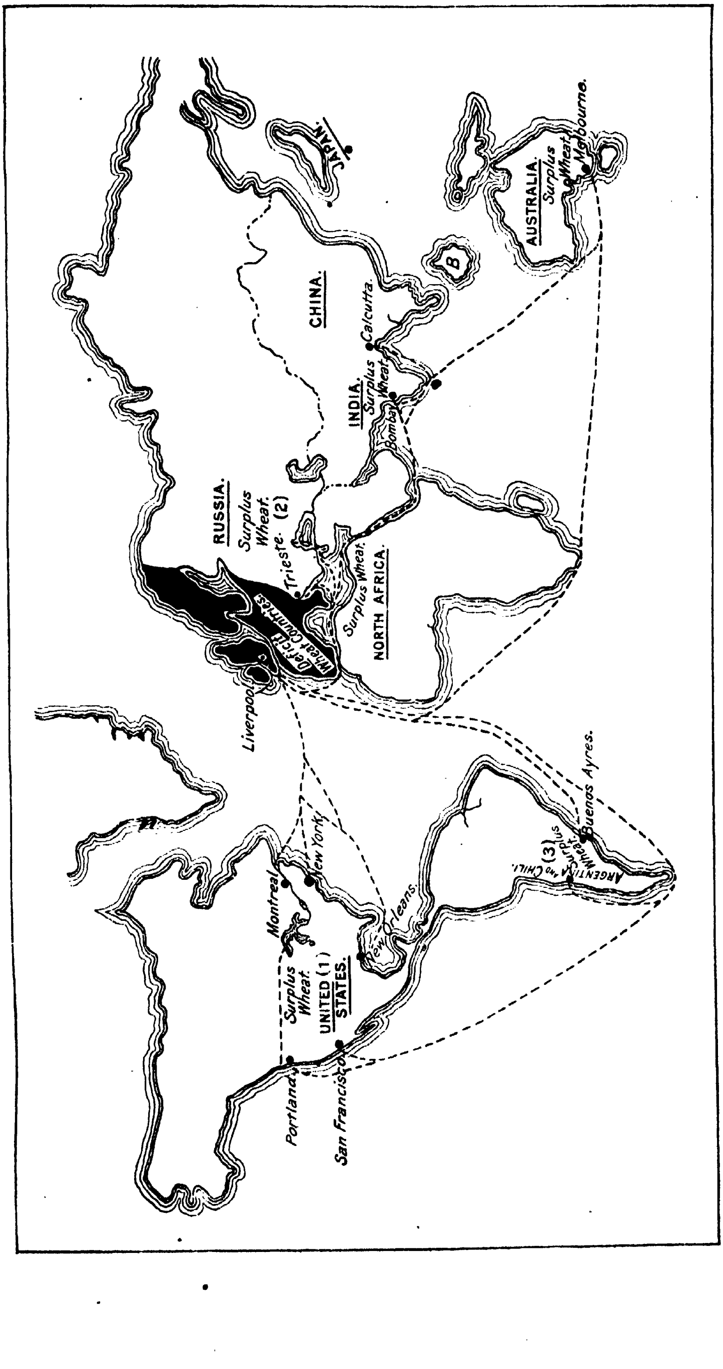
[1] U. S. Dept. of Agriculture, Distribution of Exports, 1891–1898, pp. 117–121.

[Map of surplus and deficit wheat countries.]



bushels) from the surplus countries to the deficit countries. From the standpoint of each surplus country this movement must be made within the least possible time after harvest in order to reach the market in advance of competing surpluses from other countries. From the standpoint of each deficit country it is to its interest to postpone buying until the arrival of competing stocks bears down the level of prices. Thus the selling and the buying countries form two great groups of bargainers separated, one may say, by half the circuit of the earth.

The geographical scope of the problem of wheat distribution is indicated by the following list of countries involved in these two groups and by their location on the map:

Countries with wheat surplus.
Canada.
Argentina.
Chile.
Uruguay.
United States.
Austria-Hungary.
Bulgaria.
Roumania.
Russia.
Turkey.
British East Indies.
Australasia.
North Africa.

From which distribution is made to the following:

Countries with wheat deficit.
Belgium.
Denmark.
France.
Germany.
Greece.
Italy.
Netherlands.
Portugal.
Spain.
Norway and Sweden.
Switzerland.
Great Britain.
Japan and China.

The share of the different grand divisions in the wheat trade between countries is shown below.

The world's yield of 2,897,924,000 bushels in 1898 was divided among six continental areas of production.

About 87 per cent of the world's wheat never leaves the country in which it is grown, and simply enters into the internal commerce of these respective countries. The other 13 per cent comprises the wheat of international commerce.

Disposition of the world's wheat crop, 1898.

	Production by continents.	Retained at home.	Export movement.
	Bushels.	*Bushels.*	*Bushels.*
Europe	1,548,881,000	1,429,303,000	119,578,000
North America	758,303,000	525,108,000	233,295,000
Asia	421,321,000	418,000,000	3,321,000
South America	72,000,000	42,772,000	29,228,000
Africa	44,439,000	43,989,000	450,000
Australasia	34,890,000	34,340,000	640,000
	2,879,834,000	2,493,512,000	386,512,000
Per cent	100	86.6	13.4

	Per cent.
Proportion of world's export movement from North America	60.4
Proportion of world's export movement from United States alone	56.2
Proportion of world's export movement from North and South America	68
Proportionate value of wheat exports in agricultural exports from United States	25
Proportionate value of wheat exports in total exports from United States	17.8

The United States furnished over half (56.2 per cent) of the wheat required to make up the deficit of other nations. North and South America supplied 68 per cent of this deficit. The larger the proportion supplied by any country the greater its influence on the foreign price.

For the year 1898 the United States was the leading country in production of a surplus. Europe was deficient and so was Asia. Hence the price for the United States wheat was greatly improved.

The value of cereal surpluses in the United States is also affected by the position of its harvest season in the calendar of the world's series of cereal harvests. Ninety-five per cent of the wheat crop of the world is produced in the northern hemisphere. The world's cereal harvests, beginning in the southern hemisphere, gradually move northward until in the months of June, July, and August they reach a climax, throwing upon the world's markets three-fourths of the world's total production within the last ninety days of the close of the calendar year. Naturally during this time prices strike rock bottom. The superabundance of other foods than grain foods in the autumn helps to hold prices down. And the almost universal practice of selling the surplus immediately after harvest still further reduces the level of prices at which this surplus of the farm passes into the world's visible supply.

Calendar of world's wheat harvests, by months and yield.

Months of harvest.	Bushels harvested.	Months of harvest.	Bushels harvested.
January	96,187,000	December	10,893,000
February and March	128,460,000		
April	209,860,000		
May	66,848,000	Total year's harvest (100 per cent)	2,879,923,000
June	883,089,000		
July	894,179,000	Total harvested in June, July, and August (74 per cent)	2,127,712,000
August	350,444,900		
September and October	238,021,000		
November	1,939,000	Total harvested in other nine months (26 per cent)	752,211,000

The surplus in the year 1898 is 386,512,000 bushels, and three-fourths of it, or 290,000,000 bushels, are harvested within 90 days, most of which enters into the visible supply within the next month or two. This gives the world a publicly known stock of possibly 200,000,000 bushels, but the table below shows that the deficit countries draw on this stock, so far as it is carried by water, at the rate of less than eight million bushels per week. Under these conditions the consumer has the advantage of the producer, because the former buys only as he needs wheat. This condition materially influences prices to consumers, (1) by keeping them to the level of producer's price plus distributing expenses, determined by competition among traders, and (2) by giving to traders the benefit of a rise or imposing on them the loss from a fall in prices. The slow rate of distribution of this quickly accumulated surplus is shown in the world's weekly wheat shipments.

Bradstreet's report of the world's weekly wheat shipments by sea.

1897.	Bushels.	1898.	Bushels.
July 5	6,076,000	January 3	7,471,000
July 12	4,239,000	January 10	4,737,000
July 19	3,871,000	January 17	7,007,000
July 26	3,811,000	January 24	5,078,000
August 2	5,103,000	January 31	7,238,000
August 9	5,020,000	February 7	5,377,000
August 16	7,284,000	February 14	5,801,000
August 23	7,210,000	February 21	7,373,000
August 30	7,753,000	February 28	6,906,000
September 6	9,812,000	March 7	7,410,000
September 15	9,190,000	March 14	7,013,000
September 20	10,059,000	March 21	6,314,000
September 27	9,631,000	March 28	8,216,000
October 4	9,244,000	April 4	7,623,000
October 11	7,651,000	April 11	8,886,000
October 18	9,455,000	April 18	9,036,000
October 25	9,056,000	April 25	6,611,000
November 1	9,479,000	May 2	8,497,000
November 8	8,975,000	May 9	8,209,000
November 15	9,205,000	May 16	8,561,000
November 22	9,875,000	May 23	11,175,000
November 29	8,721,000	May 30	13,029,000
December 6	9,850,000	June 6	10,848,000
December 13	8,933,000	June 13	9,571,000
December 20	6,708,000	June 20	10,117,000
December 27	6,488,000	June 27	8,647,000

6. THE CORN MOVEMENT AND AMERICAN FARM ECONOMY.

Corn is the most valuable product of our agriculture. For 1899 its value is placed at $629,000,000. Hay ranks next at $412,000,000. The feeding crops—corn, hay, and oats—together amount to $1,240,000,000. The food crops—wheat, rye, barley, and potatoes—have a total value of only $450,000,000. Thus out of the seven principal crops those on which the equipment of the farm depends are larger by far in value than those which provide subsistence to man. In other words, out of the total product of the farm in raw materials about three-fourths are required for the maintenance and fattening of animals and one-fourth goes to support man.

In the farm economy corn plays a principal part. Its economic function is very different from that of wheat. Wheat is the index to our foreign trade, but corn is the basis of domestic prosperity. This is true both in a national sense and the economy of the farm. It is therefore the most universally cultivated cereal crop in the United States. The absence of it or an adequate substitute is a source of weakness in the organization of foreign systems of farming, and its presence is a source of great advantage to our own.

This advantage appears in the fact that it enables the American farm to keep a larger number of live stock over winter in preparation for the future market than farming systems without it can afford to keep. They have to rely on hay, ensilage, or more expensive grain feed for fattening stock. This limits the use of live stock materially and adds so much to the cost of producing meat that the presence of corn in our farm organization assists materially in enabling us to to command the world market in such kinds of meat as are dependent on corn supplies. In corn-fed beef and pork the United States is easily first in the world, both in domestic and foreign trade.

Corn, therefore, while not so important a factor for export trade, has a function in our farming system which enables us to compete with the world in these products of the farm in which it is the main productive agent.

Disposition of the corn crop of the United States.

	1894.	1895.	1896.	1897.	1898.
Total crop ....bushels..	1,212,770,052	2,151,138,580	2,283,875,165	1,902,967,933	1,924,184,660
Stock on hand the following March 1.....bushels..	475,565,430	1,072,273,700	1,164,405,884	782,870,651	800,533,109
Per cent of crop	39.2	49.8	51.0	41.1	41.6
Consumed in county where grown ....bushels..	1,049,834,950	1,679,258,200	1,660,619,251	1,491,350,595	1,528,179,358
Per cent of crop	86.6	78.1	72.7	77.5	79.1
Shipped out of county where grown ...bushels..	162,935,050	471,880,800	623,255,914	411,617,337	396,005,302
Per cent of crop	13.4	21.9	27.3	21.3	20.0
Total export to June 30, following year..bushels..	65,324,841	27,691,137	99,992,835	176,916,365	208,744,939
Per cent of total crop.......	5.3	1.3	4.3	9.3	10.8
Total export of corn to end of harvest year, November 1 ....bushels..	....	122,485,323	182,176,878	212,099,751	256,498,281

These figures show (1) that over three-fourths of the corn crop is consumed in the county where grown, (2) that only one-fifth of it enters into internal commerce of the country, (3) that from 5 to 10 per cent only enters into foreign distribution.

The explanation of this small exportation is to be sought in settled conditions in European consumption.

The following statement gives the total quantity of corn (exclusive of corn meal) annually exported from the United States during the past 10 years and also the quantity exported to Europe during the same period:

Exports of corn from the United States.[1]

Fiscal years ended June 30—	Total exports.	Exports to Europe.	Fiscal years ended June 30—	Total exports.	Exports to Europe.
	Bushels.	*Bushels.*		*Bushels.*	*Bushels.*
1900..................	209,348,273	192,519,785	1895..................	27,691,137	23,225,540
1899..................	174,089,094	151,978,648	1894..................	65,324,841	52,158,579
1898..................	208,744,939	181,799,811	1893..................	46,037,274	30,260,017
1897..................	176,916,365	154,810,002	1892..................	75,451,849	69,591,177
1896..................	99,992,835	88,856,848	1891..................	30,768,218	23,533,277

[1] From the Crop Reporter, August, 1900.

"As rye is the characteristic food crop of Germany and Russia, millet of India, and wheat of France, so corn is preeminently the characteristic grain crop of the

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United States. Over three-fourths of the entire corn crop of the world is produced in this country. As regards distribution, however, the most significant fact is that from eight to nine tenths of the total exports are usually consigned to the various countries of Europe, preeminent among these takers being Great Britain, Germany, France, Belgium, Denmark, and Holland. In these countries, it is interesting to note, the use of corn is mostly confined, as is the case in the United States, to the feeding of live stock, though it is also employed to a limited extent in brewing, distilling, and other industries, and in the manufacture of proprietary foods and confectionery. To this European demand is principally due the recent increase in our total exports, and there is gratifying evidence that the increase in demand from this source has a promise of permanency in that it is largely due to a growing appreciation of the value of corn as a cheap food for animals."[1]

Here, too, in the failure to find a foreign market of any importance is possibly to be sought the explanation of the low level of prices for corn. The crop until very recently has been shut up to domestic consumption, with a steadily increasing production both in area and in amount.

7. MAIN FEATURES OF THE GRAIN-DISTRIBUTING SYSTEM.

We have thus described the grain movement in its most general aspects. Its function in the national economy is second to that of no other factor in our agricultural life. It is, directly and indirectly, the chief feature in our relations with the commercial world. We now proceed to an analysis of the organization of the system of handling the cereal surplus, which has grown up in the course of the past few decades.

The annual grain movement within the United States presents several specific features each of which affects the relation of the producer and consumer in some vital way. Among these features are the country elevator system, where the producer parts with physical control of his grain; the local grain dealers, the primary markets at which the surplus crop in the form of the visible supply is concentrated; the railway carriers, the terminal elevator system, by which the visible supply is held for distribution to the internal and foreign centers of consumption; the milling interests in the interior, the seaboard movement of grain, and the foreign export movement in its relation to the world's market. All these affect the thing we are desirious of determining, namely, the position of the producer, and the ascertainment of the extent to which the distributive factors affect favorably or unfavorably the price that the consumer pays for these products.

II. THE MECHANISM OF THE PRIMARY GRAIN MARKETS.

I. THE CEREAL MOVEMENT TO PRIMARY MARKETS.

The primary grain markets are those railway centers into which the grain of the surplus States is concentrated in the first stage of its movement after leaving the producer. The ten most important ones are Chicago, Minneapolis, Duluth-Superior, St. Louis, Milwaukee, Toledo, Kansas City, Peoria, Cincinnati, and Detroit. Each of these receives from 10,000,000 to 300,000,000 bushels of grain on the average each year.

The geographical location of these cities is of much significance in the distribution of these crops. These primary markets with one exception lie on the western heads of the lakes or on the great interior waterways. Taken together the primary markets are located on the circumference of an irregular circle, inside of which are scattered thousands of shipping points from which the yield of grain has to be gathered into these centers of accumulation.

The next factor in the distributive outline of the grain movement to primary markets is the relation of the systems of railroads to the areas of surplus production. From each of these centers into which the crop is first collected there radiates a fan-shaped network of railway lines with the primary market at the apex or hinge of the fan. From Chicago these lines reach southward, westward, and northward. From Duluth, Milwaukee, Minneapolis, and St. Paul they branch out in the same general directions. Likewise from St. Louis, Kansas City, Detroit, Toledo, and Cincinnati. The whole movement from farm to primary market takes these three general directions toward eastern points from the North, the South, and the West within this area of the twelve surplus grain States.

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[1] From the Crop Reporter, August, 1900.

This fact results in many competing railway lines reaching out in these three directions for grain traffic. From Chicago there are twenty-one roads which radiate outward over the same general territory within which roads centering in other primary markets compete. Twenty-seven systems concentrate in Kansas City. Ten roads reach out from Minneapolis. Twenty-five from St. Louis spread out over the territory from which grain traffic reaches that city. The situation throughout the producing territory with relation to the primary grain markets is such, therefore, that the intensity of competition among grain carriers increases with the distance from the circle of primary markets toward the center of the productive area.

This is a factor of immense economic significance in distribution. Nor is its importance simply limited to this stage of the grain movement. Inside of this circle of primary markets the struggle for control of the crop to be moved goes on all the more actively because of the fact that control of the grain by one or the other road determines the direction by which the grain gets to the seaboard and thence to foreign markets. The primary markets are simply strategic points through which the distributive interests on the Atlantic coast, on the Gulf, on the Lakes, and on the St. Lawrence vie with each other in the partition of a traffic that amounts to hundreds of millions of bushels a year.

The movement from farm to primary markets is almost wholly a rail movement. Probably no other portion of the country, of an equal area, is more fully equipped with railway mileage per square mile of land than this cereal section of the United States. The grain movement from farm to primary markets comprises one of the main features of the traffic year. The railway systems rely upon this traffic as upon no other for their net earnings, because the volume of the traffic from farm to market determines largely the volume of traffic in the other direction, from factory to farm. Not only, then, is the cereal crop the basic crop in western agriculture, but the portion of that crop which enters into trade is the basis of commercial prosperity for the primary markets and the railroads. Of the railroads centering in Chicago which participate in this movement, as many as ten carry each from 10,000,000 to 75,000,000 bushels of cereal products (grain and flour) yearly to this point of concentration. The receipts of wheat alone aggregated over 5,500,000 bushels in the month of October in 1898. Of still greater volume is the corn movement. The receipts for 1898, practically all by rail, amounted to 127,000,000 bushels. Oat receipts were but little less—110,000,000 bushels. These three cereal crops, together with flour reduced to wheat, amounted to 296,000,000 bushels. Rye and barley receipts together make 23,000,000 bushels more, thus giving a grand total of 321,000,000 bushels in the concentrating movement at a single primary market. Of this amount, scarcely 3,500,000 bushels, including flour, were received by lake and canal.

The concentrating movement is practically a rail movement, from circumference to center; that is, from the productive areas toward competitive centers for subsequent distribution. Water transportation enters only slightly into the shipping of grain to the primary markets. The producer gets no direct advantage from the location of St. Louis on the Mississippi, or of Duluth or Milwaukee on the Lakes, in this primary movement of this surplus grain. It is a significant fact that in 1899 the total receipts of wheat, corn, and oats at St. Louis by wagon were almost equal to the receipts by way of the six rivers that have communication with that market.[1] Out of a total movement of 50,000,000 bushels of grain, little more than a million arrived by water transportation; the rest came by the twenty-five lines of railway centering there, almost wholly from the South, North, and West.

How does this organization of the grain movement affect cereal prices? The competition of primary markets for the same grain generally tends to keep up the level of prices to the producer. The receipts at primary markets vary from year to year, showing that a market with a lower level of prices than its competitors is sure to lose its usual proportion of the traffic. A study of the following figures and the accompanying map seem to bear out this view, that the competition of primary markets, acting through the radiating lines of railroads, is a leading factor in maintaining farm prices.

(1) RECEIPTS OF GRAIN AT TEN PRIMARY MARKETS.

The ten primary cereal markets of first importance, with their relative rank as receiving centers, are given in the following table:

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[1] Trade and Commerce of St. Louis, 1899, p. 154.

Receipts of grain at ten primary markets for four years.[1]

	1899.	1898.	1897.	1896.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*
Chicago	293,901,815	296,513,479	283,505,593	242,388,156
Minneapolis	109,364,480	95,254,900	96,813,980	81,552,720
Duluth-Superior	69,524,434	79,020,088	64,308,166	71,202,714
St. Louis	48,243,737	54,273,215	57,600,639	51,131,514
Milwaukee	46,221,926	50,846,151	36,172,336	28,393,794
Toledo	37,339,134	33,813,028	25,848,554	16,983,000
Kansas City	31,745,650	45,685,900	50,597,200	21,617,500
Peoria	19,961,800	30,325,230	33,394,820	40,723,150
Cincinnati	13,164,179	25,320,319	27,950,292	20,759,334
Detroit	8,712,230	10,903,314	10,596,275	9,165,136
Total	678,179,385	721,955,624	686,787,855	589,920,048
Total yield for United States	3,518,968,796	3,411,689,787	3,226,032,361	3,587,970,185
Per cent of total yield received at ten primary markets	19.3	21.1	21.2	24.8

The competitive features in the western movement of grain to primary points is still better shown by the aid of the map indicating the relation between different productive areas and primary markets which compete through the railroads reaching these areas. The entire northwestern and western situation is thus presented at a glance. It reveals the fact that a given area may to-day be commercially tributary to Chicago, to-morrow to St. Louis, and next day to Kansas City. In other words, while, as a general thing, grain goes to a particular market, there is no considerable territory that does not have the choice of two or more primary markets. A cent or two difference will turn the tide from hundreds of shipping points to other markets.

EXPLANATIONS OF NUMBERS ON MAP OPPOSITE PAGE 47.

No. 1.—Tributary, as a general rule, to Minneapolis and Duluth. If at times Chicago market is manipulated or extraordinary demand exists, wheat from this territory will move to Chicago.

No. 2.—Wheat from this location moves either to Chicago or Milwaukee. At times, however, western portion will go to Minneapolis or Duluth. A portion of the territory is extremely close and a slight variation will take it away from one market to another.

No. 3.—Wheat from this location is naturally tributary to Milwaukee, Ashland, Manitowoc, or Green Bay.

No. 4.—Wheat from this location is tributary to Kansas City, St. Louis, or Chicago. A slight variation in prices will take it away from one market to another.

No. 5.—Territory is either tributary to Chicago or St. Louis. Any slight variations in the market will pull from one to another.

No. 6.—This territory tributary to St. Louis, unless Chicago markets being manipulated or badly out of line.

No. 2A.—Wheat from this section moves primarily to Chicago or Milwaukee, but is also quite liable to go to other markets north or south.

No. 4 or 5.—Wheat from this section moves primarily to Kansas City, St. Louis, or Chicago, but may go to other markets.

(2) TERRITORIAL COMPETITION AMONG PRIMARY MARKETS.

The situation of the consumer is now to be considered in his relation to this system. How does this system of crop distribution affect his interests in the market, and thus the price that he pays for his cereals?

In the earlier history of the grain movement the Western farmer held that too large a proportion of what the consumer paid went to the railroads and to the commercial agencies engaged in distribution between producer and consumer. To this he attributed the low prices received for his grain. Granger legislation was the remedy he sought to apply. These laws embodied the policy of a uniform rate per mile per unit of product. They did not work, because they were based on a misconception, first, of the structure of the distributive system, and, secondly, on a failure to recognize that the producer is not the direct beneficiary in reductions in the cost of distribution. It is the consumer that profits directly by such reduction. The producer's gain comes mainly from the increased demand that may arise from reducing expenses of distribution and thus increasing the volume of consumption. Nevertheless, that historical case of the farmer versus the railroad was based on sound economic doctrine, namely, that the producer has a right to reach the consumer at a reasonable rate of expense for distribution.

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[1] Trade and Commerce of St. Louis, 1899, p. 172. Discrepancies in figures for various places are largely due to the omission of flour in its equivalent of bushels of wheat.

The question is whether there is anything in the railway situation, taken by itself as the connecting link between the producer and these primary centers, that unreasonably limits the access of the producer to the consumer.

Certainly there is no lack of railway mileage. If anything, the surplus-cereal States have more railroads than can be profitably operated, rather than too few. This assumed superfluity of mileage operates in favor of a lower cost of reaching the market. Hence it is to the advantage of the consumer, rather than to his disadvantage. It increases the element of competition for carrying the product. The overlapping of territory by different lines has resulted in a greatly reduced cost of reaching the market. Many railway lines centering in primary markets are practically paralleled or intersected more or less completely throughout the greater part of their length. Competition among markets and carriers inures directly to the consumer's gain.

(3) COMPETITION OF CARRIERS IN ILLINOIS AND IOWA.

We may take the State of Illinois, as a typical grain-growing territory, to illustrate the relation of the producer to the primary market so far as the railroads are concerned. Iowa is similarly situated with respect to the rivalry of railroads to obtain the traffic arising from agriculture.

President Stuyvesant Fish, in speaking on the question of noncompetitive territory within which a railroad has a monopoly of business in that State, presents a set of facts which bear directly on the subject. He says of Illinois and Iowa:

"There is in those States no territory which can be considered contributary to the Illinois Central in such a sense as to exclude very active competition by other railroads and by water for the traffic originating therein or destined thereto, especially the traffic in farm products.

"The last report of the Interstate Commerce Commission on Statistics of Railways relates to a term ended nearly two years ago—June 30, 1898. It states, at page 12, that there were then in Illinois 10,851.67 miles of railroad in operation, or 19.38 miles of railroad per hundred square miles of territory. That is to say, there was then 1 mile of railroad to every 5.16 square miles in the State.

"Not only were there then more miles of railroad in operation in Illinois than in any other State, but the number of miles of main line of railroad therein per hundred square miles of territory (19.38) exceeded that in New York and, indeed, in any other State except these six:

Connecticut, where it was	20.83
Massachusetts, where it was	26.43
New Jersey, where it was	30.01
Ohio, where it was	21.43
Pennsylvania, where it was	22.03
Rhode Island, where it was	20.56

"The number of miles of main line of railroad in operation on June 30, 1898, per 10,000 inhabitants, is thus given by the Interstate Commerce Commission:

Illinois	24.47
Connecticut	11.66
Massachusetts	8.19
New Jersey	13.36
Ohio	20.52
Pennsylvania	16.25

"Obviously the farms and the farmers of Illinois were, alike, well supplied with railroads.

"The Report of the Railroad and Warehouse Commission of Illinois, 1898 (p. iv), shows that there were then 118 railroads, of which 37 were classed as subsidiary. This would indicate that there were 81 companies operating railroads in Illinois. Of these, 69 filed both operating and financial reports with the commission. It is safe to say that there are in Illinois more than fifty independent companies operating railroads. No other State has so many.

"The Illinois Central is now operating 1,758 miles of railroad in Illinois. Not to speak of 28 junctions in Illinois between the various lines controlled by the Illinois Central Railroad (which at least give the farmer a choice of markets), it is crossed at no less than 103 separate junction points by other independent railroads. In estimating the number of such points, Chicago, for instance, where we come in conflict with more than twenty other railroads, is counted as one. So, also, are East St. Louis and many other points where we are crossed by several other railroads. We have, therefore, in Illinois the competition of at least one and often of several cross lines at distances averaging but 17 miles apart. Moreover, every mile of our railroad is somewhere and somehow paralleled by others.

"As is well known, the competition between railroads which cross each other is not confined to the point of crossing, but always extends to at least the next station on each side of that point, and often much farther, the number of stations embraced depending on the angle of the crossing.

"It is now many years since the Illinois farmer has failed to have the choice of at least two railroads by which to ship his products.

"While my remarks have been here confined, for the sake of brevity, to Illinois, from which we draw nearly all of the grain exported by our road, do not think for a moment that we have not similar and extremely active competition in Iowa. There, and in the Southern States as well, our lines are also throughout paralleled by competing roads and crossed at frequent intervals.

"The Illinois Central is by no means the only railroad carrying grain to New Orleans. The Yazoo and Mississippi Valley Railroad, for instance, takes a considerable volume, which is brought to it at Memphis from Kansas City and other Western points. The Texas and Pacific has a large elevator on the west bank of the Mississippi at Westwego, opposite New Orleans. If I mistake not, the Southern Pacific also brings in some grain from Texas points, and it may be that the New Orleans and Northeastern (Queen and Crescent) and the Louisville and Nashville bring in some. While I doubt if they carry much to New Orleans, the Louisville and Nashville is a very active competitor of ours at East St. Louis and various points in southern Illinois and elsewhere for grain going to the southeastern part of the Southern States, generally called 'Green Line Territory.' So also is the Mobile and Ohio, which, with the New Orleans and Northeastern, parallels our line all the way from St. Louis to New Orleans. The Louisville and Nashville controls elevators at Pensacola, whence some grain has been exported. We also feel, at least in the matter of rates, the keen competition of the Kansas City, Pittsburg and Gulf, via Port Arthur, and that of the Atchison, Topeka and Santa Fe, the Southern Pacific, and the connections of the Chicago, Rock Island and Pacific, via Galveston."

(4) EXPENSES OF CONCENTRATING WHEAT AT CHICAGO.

Commercial expenses include trade expenses other than transportation. A comparison of such rates and charges on wheat from Nebraska to Chicago at periods 15 years apart will show just how much reduction has been effected in this part of distribution. We have collected the various items of expense that were in force in 1885, and the corresponding items for 1900, from Beatrice, Nebr., to Chicago. This includes the charge of transfer into a public elevator and storage there for 10 days.

Commercial expenses of concentration of wheat at Chicago.

	1885.	1900.
	Cents per bushel.	*Cents per bushel.*
Country elevator charge	3 to 8	½ to 2
Commission for selling on consignment at Chicago	¼ to 1½	1
Elevator transfer charge at Chicago	1¼	¾
Total expenses	3½ to 10¾	2¼ to 3¾

On the basis of this calculation, omitting inspection and weighing charges, which amount to 50 or 60 cents per carload or one-tenth of a cent per bushel at the present time, we find that there have been the following reductions in the commercial charges (transfers and commissions) for wheat from farmers' wagon in Nebraska into terminal elevator in Chicago:

	Minimum.	Maximum.
	Cents per bushel.	*Cents per bushel.*
1885	3.5	10.75
1900	2.25	3.75
Reduction in 15 years	1.25	7.00

Reduction in these charges ranges from 36 to 65 per cent.

In 1884 the average farm price of wheat (December 1) was 64½ cents per bushel; in 1897 it was 76.3 cents. If we take the difference between the Chicago cash price and the farm price to represent the cost of concentration we have the following result:

Reduction in cost of concentration.

	1884.	1897.
	Cents per bushel.	*Cents per bushel.*
Average Chicago cash price	82.7	81.2
Average farm price	64.5	76.3
Cost of concentrating at Chicago	18.2	4.9

This is, of course, a comparison of very general averages; still the averages used are indexes of the general level of prices, the farm price being that received by the producer, and the Chicago price being the level of prices paid by the consumer, say a miller, in that city. The difference between the value at the two places stands for the cost of concentration at this primary market, which is the principal one of the country. On these assumptions, all of which seem reasonable because verifiable by official figures, the concentrating the wheat surplus at Chicago was done in 1897 at between one-fourth or one-third of the cost of 13 years before. In 1884 the wheat was worth just about what it was in 1897 at Chicago, but in 1884 it cost 22 per cent of its Chicago value to get it from the farm to the consumer, whereas in 1897 the cost of marketing was only 6 per cent of the Chicago value.

2. THE FARM MARKET AND THE COUNTRY ELEVATOR SYSTEM.

The American farmer retains about one-third of his wheat crop for home consumption and seed. About one-half or two-fifths of the corn crop never leaves the farm. Most of the oat crop and practically all of the rye and barley crops go into the market. Each of the leading cereal crops occupies a different relation to the market. Apart from the portion consumed on the farm in various ways, the surplus available for market has three outlets. It may be required for local consumption by mills, it may be carried East or South for domestic consumption, or it may pass into the foreign market. Such States as Pennsylvania and North Carolina practically consume all the farmer's surplus at the mills within the State. The price here is determined by the price at which Western grain can be obtained. The price for the country as a whole, or for any part thereof, is fixed by the price prevailing at the nearest primary market in the surplus section of the country plus the transportation rates to that locality.

The surplus section fixes the price for the country in general. The quotations which the farmer in the surplus section receives are sent out from the primary markets. The primary markets have become so extended as to reach out into every surplus locality. At the country elevator, where grain is brought by wagonloads direct from the farmer, we find the outer limit of the primary market. The farmer's market place is, in reality, the local elevator.

(1) Railway Relations to Country Elevators.

The buyer of grain meets the producer within hauling distance of his own home. The terms of sale are made at the railway station where the shipping is done. There are two leading classes of buyers. They are local grain dealers and the terminal grain buyers. The operations of the former are local, but the latter control lines of elevators running into the hundreds along the railroads reaching into the grain territory. The line elevator companies, as they are called, really are the most important factor in the grain market for the producer. The policy of the railroads has been to put these two classes of buyers in a position to receive and ship the grain promptly.

Generally speaking, the railroads have relied upon the local grain dealer and the line elevator companies to provide county elevator facilities for receiving and shipping grain. Along some lines, however, farmers' associations have provided their own elevating facilities, notably in Minnesota and the Dakotas.

The policy of the railroads is clearly outlined in the brief statements given below on this subject, mainly in the language of their own officers:

a. Chicago and Northwestern Railway Company.—There are 898 grain elevators located on the lands of the Chicago and Northwestern Railway Company leased for the purpose. In addition there are 288 grain elevators located on private property which are served by side tracks of the Northwestern Company. Of these elevators, 577 are owned and operated directly by local grain buyers, 28 are owned and operated by farmers' associations, and 521 are owned and operated by parties or firms who control warehouses at terminal stations and are commonly classed as warehousemen. Sixty others are not specified.

Upon the lines of the Chicago, St. Paul, Minneapolis and Omaha Railway Company there are 302 grain elevators located upon lands of the company leased for the purpose; and 43 elevators are located on private property and served by side tracks of that company. Of the elevators upon the lines of this company, 116 are owned and operated directly by local grain dealers, 11 are owned and operated by farmers' associations, and 218 are owned and operated by parties or firms who control warehouses at terminal stations and are commonly classed as warehousemen.

b. Burlington, Cedar Rapids and Northern Railway.—In reply would say: It is not the policy of this company to own the elevators on its line, and with two exceptions, where the company was in a measure compelled to purchase the elevators, it owns no such property. With the exception of three or four elevators controlled by so called "farmers' associations," the elevators are owned by parties located along the line of road, and who may have houses at five or six different stations. There are no elevators owned by parties at primary markets.

c. Chicago Great Western Railway Company.—This company encourages as far as possible local men living at its stations to build grain elevators and handle the grain at their respective stations. It avoids as far as possible being interested in the ownership of the elevators, and is never interested in the purchase of the grain at local stations. The company has at times contributed small amounts toward building such elevators, carrying its interest for the grain buyer until he is able to pay for it. At present we have no such interests. There are a few farmers' associations (so called) on the line of the road. They are, however, simply corporations engaged in the business of buying and selling grain, in which a few of the wealthier farmers in each locality are owners of the stock.

d. Chicago, Milwaukee and St. Paul Railway Company.—It is the policy of this company to furnish sites for elevators and grain warehouses on its station grounds to any responsible firms or individuals who desire to engage in the grain trade. There are elevators and warehouses at practically every station on this company's lines owned by local grain dealers. At quite a number of the stations there are also elevators owned by farmers' associations and by firms whose central offices are located in Chicago, Milwaukee, Minneapolis, and other larger points, these latter being known as line buyers.

e. Chicago and Eastern Illinois Railroad Company.—The Chicago and Eastern Railroad Company do not own or control any local elevators on their line. Local grain dealers own a portion, farmers' associations a portion, and a portion is owned by grain-buying firms whose central offices are located in Terre Haute, Ind. We make an attempt to encourage competition in buying, and all are treated alike.

f. Chicago, Rock Island and Pacific Railway Company.—But few of the elevators are owned by this company and very few by farmers' associations; a large number are, however, owned and operated by local grain dealers and a number by grain-buying firms located in some of the larger cities.

It is the policy of this company to lease at a nominal rent suitable space on its right of way to grain dealers who will erect and operate grain houses, and at nearly all of our stations either large or small in the grain-bearing sections these elevators are in active operation.

g. Chicago and Alton Railway Company.—It has been the policy of this company to establish grain elevators at various points on this line, and all such elevators are owned and operated independent of the railroad company.

We have in Illinois 122 elevators located on our tracks at 75 different stations, and in Missouri 38 elevators located at 32 different stations. Of the elevators in Illinois 120 are owned and operated by local dealers and 2 are in the hands of the farmers' associations. The 38 elevators in Missouri are operated by local dealers. I know of no elevator on our line owned or operated by grain-buying firms having office at central or primary markets.

The policy of the grain dealers or operators of these elevators is to buy the grain from the farmers along the line of our road and ship same to the grain centers in different parts of the country, to be sold on commission or on direct bids received from such markets.

h. Oregon Railroad and Navigation Company.—On the lines of the Oregon Railroad and Navigation Company there are no elevators such as are used in the wheat States of the Mississippi Valley. The grain comes from the farmers' hands in sacks, which are piled in warehouses and on platforms, awaiting shipment to point of destination. These warehouses and platforms are not owned by the railroad company, but by the grain-buying firms who collect the cereals for ultimate shipment.

This company believes that these warehouses and platforms should be handled exclusively by the patrons of the road.

Some light is thrown on the methods to which railroads resort to obtain traffic in competitive territory in the evidence submitted to the Interstate Commerce Commission in the case of May *v.* Edwin McNeill, etc. The fact is here established that the line elevator companies actually do act as freight solicitors for the railroads. Such a company operating at lake terminal points is here represented as receiving compensation for obtaining traffic for the Oregon Railway and Navigation Company whose terminal is at Portland on the Pacific. In this case the rate paid the line elevator company amounted almost to 3 cents per hundred pounds.

The evidence states:

"Much, if not most, of the wheat hauled to station warehouses is sold by the farmer before shipment, and the competing roads have paid commission or other form of compensation to buyers or other parties in the wheat region for securing grain shipments over their lines. In some instances testified to, the farmers were paid by a buyer soliciting for defendant's competitor from 1 to 10 cents a bushel in excess of the market price. The Pacific Elevator Company (F. H. Peavey & Co., of Portland) has receiving elevators or warehouses along the lines of the Oregon Railway and Navigation Company, and under a long standing contract has been paid large sums for obtaining and forwarding grain shipments over those lines, equalizing ocean charters as between Portland and Tacoma, and possibly other services, Vouchers in evidence show that these payments by receiver McNeill to Peavey & Co., as approximate amount due on account of shipments of grain from points on the Oregon Railway and Navigation system, amounted July 4, 1894, to April 30, 1895, to $86,357.77, and that such payments were based on rates of commission of 57½ and 58⅓ cents per ton and an aggregate of 149,714.22 tons, equal to 4,990,474 bushels. The total amount of wheat carried over the Oregon Railway and Navigation lines from July 4, 1894, to February 28, 1895, was 8,370,043 bushels. Such rates of 57½ and 58⅓ cents per ton equal 2⅞ and 2$\frac{11}{12}$ cents per hundred pounds, respectively. (Decision 391, Interstate Commerce Commission, Feb. 8, 1896, p. 21.)

i. Chicago, Indianapolis and Louisville Railway Company.—Our policy with reference to grain elevators is to secure the location of as many as possible along our line. As to rates, etc., however, we make no discrimination between elevator shipments and track and car shipments. The elevators along this road, with one exception, are owned by local operators. One elevator is owned by a firm residing at Indianapolis, about 100 miles distant from the elevator. This company does not own any elevators.

j. Iowa Central Railway Company.—First. Our company has adopted the policy of locating independent elevators along its line of road; in other words, we do not own nor control elevators located on our line. Local grain dealers own all elevators on our road excepting at Rockwell, where a farmers' cooperative association owns an elevator. which has been handled very successfully; in fact it is one of the most successful cooperative associations in the United States.

Second. Our local grain dealers sell their grain through commission houses at terminal points, say Chicago, Peoria, etc.

k. The Wabash Railroad Company.—I do not think the Wabash Railroad Company has any especial policy in relation to grain elevators located along our lines, except to get all the business we can at established rates. We do not own any of the elevators on the lines of our system or at terminals.

There are a number of elevators on our different lines, but I am unable to tell you who are the owners, this knowledge not being essential to us in securing the traffic.

l. Mobile and Ohio Railroad Company.—The Mobile and Ohio Railroad Company owns no grain elevators at local points upon its line, and all grain products are shipped by the producer either through elevators owned by outside interests or direct to the cars. Wherever grain elevators are owned on the line of this road it is either by local grain dealers or millmen, and I know of no case in which same are owned by farmers' associations.

The Mobile and Ohio Railroad Company owns an elevator at Mobile, Ala., but this is entirely for the purpose of handling export grain.

m. Louisville and Nashville Railroad Company.—The States through which our lines run are not large producers of grain. The grain produced along our line in Indiana, Illinois, Kentucky, and Tennessee is as a rule used by local millers or is reshipped from primary markets, such as Louisville, Ky., Henderson, Ky., Evansville, Ind., and Nashville, Tenn., to Southern territory on or beyond our line—that is to say, points in Alabama, Georgia, Florida, and Mississippi. At the points I have named there are elevators of moderate capacity established. This company, however, has no interest in these elevators. At Louisville, Ky., and Nashville, Tenn., elevators have been erected by private companies, in which I believe some of the principal grain dealers are interested. At Henderson, Ky., and Evansville, Ind., the elevators in use are of small capacity, and have been furnished by grain dealers for the accommodation of their own business. There are no elevators on our line that have been built by farmers' associations.

Aside from those I have mentioned, the only grain elevators on our line are owned by milling companies for carrying a stock of grain for milling purposes.

n. Kansas City, Fort Scott and Memphis Railroad Company.—There is not a great deal of grain loaded locally on our line, but most of it goes through elevators that are operated usually by local grain dealers.

The only elevator this company owns is one at Kansas City, which is used for storing grain and transferring from small to large cars.

o. Cincinnati, Hamilton and Dayton Railway Company.—The grain elevator at Cincinnati belongs to our company. The elevators at Toledo were owned by the elevator company, in which our road had a very considerable interest, but as the largest elevator there was burned a short time ago, the question as to just what will be done is in abeyance and there will be nothing done this year on account of the very poor wheat crop. So far as elevators are concerned which are located along the line of our road, most of them belong to grain shippers. Here and there we own elevator buildings which have been leased to grain buyers for a moderate consideration, but as buildings deteriorate, we have not kept up this practice and no doubt the entire business on the line of our road will soon be handled through elevators which are owned by individals.

p. Minneapolis, St. Paul and Sault Ste. Marie Railway Company.—We have 3 line elevator companies, with headquarters at Minneapolis, who have elevators at nearly every station along the line of our road. Of course there are elevators run by individuals living in the towns and the farmers' associations have some elevators in operation. There is also a great deal of grain shipped by the farmers themselves. This company owns but one elevator, which is located at Gladstone, Mich., and is not in any way interested in the selling or buying of grain. Give most of them a very free hand in handling the grain.

q. Grand Rapids and Indiana Railway Company.—The principal elevators on our road are located at Winchester, Portland, Decatur, Fort Wayne, Huntertown, and La Grange, Ind.; Sturgis, Nottawa, Mendon, Kalamazoo, Plainwell, Shelbyville, Bradley, Grand Rapids, Muskegon, Cedar Springs, Reed City, Cadillac, Traverse City, Boyne Falls, and Petoskey, Mich.

At Huntertown, Nottawa, and Kalamazoo our company owns the elevators, but they are operated by local grain dealers, having leased the elevators from us. At all other stations the elevators are owned and operated by local grain dealers. There are no elevators on our line owned by farmers' associations or by grain-buying firms whose central office is located in one of the primary markets. They are all operated by resident buyers.

Our policy has been to extend all reasonable facilities which we would be permitted to extend to grain elevators along our line.

r. Missouri, Kansas and Texas Railway system.—We have no special policy in this connection further than to handle the business which such elevators may tender us on the same terms as we would that of any individual shipper. This company does not own any elevators. There are two elevators located on our line, one at McAlester, Ind. T., and one at Parsons, Kans., which are owned by J. K. Davidson, a grain dealer, whose central office is in Kansas City. The other elevators and warehouses are owned by the local grain dealers.

s. Minneapolis and St. Louis Railroad Company.—Our company neither owns nor has any interest in any elevators on this road; they are owned by grain-buying firms with central offices in primary markets, by local grain dealers, and by farmers' associations. There are at nearly every station what are known as line elevators—that is, those belonging to grain-buying firms with terminal warehouses—and what are known as independent elevators, owned and controlled by local parties or farmers' associations.

t. Pere Marquette Railroad Company.—On the line of the Pere Marquette Railroad the greater proportion of the elevators are owned by local grain dealers entirely, only a very few by farmers' associations and a few by grain-buying firms whose central offices are located at our terminals, and there are a number of elevators owned by the railroad company and rented to grain buyers.

The policy of the railroad company in its ownership of grain elevators has been governed wholly by the competition in the district in which the elevators were so placed, and it has always been our intention to have no ownership except where we could get no grain people to make the investment and where the grain was going to a competing line. In all cases the shipping of the grain has been handled the same as any other freight, i. e.; no concessions in this business have been made by us.

u. Michigan Central Railroad Company.—We have no settled policy in this matter. At some points the elevators are owned and operated by the railroad company; at others they are owned by the railroad company and leased, either to the local grain dealers or to grain-buying firms whose central office is at larger points; and in other cases still the railroad company leases the ground to private parties, who erect their own elevators and operate the same. Each case has to be taken up separately on its merits, and no one policy can be adopted which will be suitable to all cases.

v. St. Louis and San Francisco Railroad Company.—The grain on the Frisco line is handled by independent elevators and warehouses, owned and operated by independent dealers entirely, our company not having any interest whatever in any of them.

w. Atchison, Topeka and Santa Fe Railway Company.—Concerning the elevators along the line of this road, they are sometimes owned by the railroad. In the absence of parties who at the time at which elevators are needed are willing to construct elevators, railroads are sometimes obliged to build them, but they rarely, if ever, operate them, preferring to lease or sell them to parties who will operate them on their own account. This has been the case with the Santa Fe, and although it still has a few properties of this kind it operates none of them. The management of the Santa Fe road holds that the business of a railroad is transportation, and while it may be obliged to build an elevator to handle grain offering for shipment, or dig a coal mine to get fuel for locomotives which is otherwise unobtainable at a reasonable price, it does not commercially engage in such traffic. In pursuance of that policy it has disposed by lease or otherwise of all of its elevator and coal properties.

3. A TYPICAL GRAIN RAILWAY EQUIPMENT.

The Northern Pacific Railway Company's facilities for handling grain are given in detail in Appendix A of this report. The facts are simply summarized in the table below to show the number and kinds of local elevators.

With the exception of a few grain warehouses on the Washington and Columbia River road, which have been erected by the railway company during the last two or three years, for lack of facilities furnished by private individuals or warehouse companies, all the elevators and warehouses are owned and operated entirely independent of the railway company. It is its policy to grant permits for the erection of such warehouses on its right of way to the elevator companies, individuals, or farmers' associations, limiting same only to an extent that will not result in ruinous competition, or, in other words, to warehouse capacity warranted by the grain tributary to the elevator location.

Experience has taught the railroad that when permission for excess facilities is granted, the producer, in the end, must pay the bill. Capital invested seeks for a return after the first struggle is over.

It will be noted that this policy is intended to supply ample capacity at all points; and that the ownership is varied to an extent that will prevent any combination so far as the railway's policy can prevent it.

We give below a complete statement of the Northern Pacific country elevator and warehouse facilities, ownership of same, and capacity, on the several branches of this company's lines. This analysis of the data presented indicates the effects of this system of grain-handling facilities upon the position of the grain producer in his relation to the market.

This company is representative, geographically and commercially, of the Northwestern wheat movement. Its lines extend from the upper head waters of the lakes, where it gets an eastward outlet for its grain traffic at Duluth and West Superior, to the grain ports on the Pacific Ocean, at Tacoma, Portland, and San Francisco. In respect to the variety of productive territory traversed it is one of most characteristic grain-carrying lines in the United States.

Summary of grain elevators on the Northern Pacific Railway.

Branches and divisions.	Stations.	Line elevators.	Capacity.	Local dealers' elevators.	Capacity.	Farmers' elevators.	Capacity.
			Bushels.		*Bushels.*		*Bushels.*
Minnesota Division	26	28	595,000	22	421,000	1	20,000
Little Falls and Dakota Branch (Minnesota)	11	9	193,000	10	183,000	3	45,000
Northern Pacific, Fergus and Black Hills Branch (Minnesota)	12	14	348,000	10	103,000	2	25,000
Northern Pacific, Fergus and Black Hills Branch (North Dakota)	10	16	365,000	3	235,000	1	4,000
Manitoba Division (Minnesota)	23	27	774,000	10	131,000	2	35,000
Manitoba Division (North Dakota)	17	40	969,000	10	175,000	1	15,000
Dakota Division (North Dakota)	21	30	875,000	19	656,000	....	....
Fargo and Southwestern Branch (North Dakota)	16	29	752,000	5	155,000	....	....
Sanborn, Cooperstown and Turtle Mountain Branch (North Dakota)	8	15	423,000	7	217,000	....	....
James River Valley Branch (North Dakota)	7	12	217,000	2	50,000	....	....
Jamestown and Northern Branch (North Dakota)	16	28	741,000	9	232,000	....	....
In Manitoba	38	60	1,423,000	7	134,000	6	190,000
Yellowstone Division (North Dakota)	10	7	135,000	7	172,000	1	10,000
Montana and Rocky Mountain Division (Montana)	13	....	....	22	1,922,000	1	60,000
Idaho Division (Washington)	12	2	100,000	29	935,000	1	60,000
Central Washington Branch (Washington)	12	5	230,000	31	1,456,000	....	....
Spokane and Palouse Branch (Washington and Idaho)	38	36	1,949,000	66	3,338,000	5	400,000
Washington and Columbia River Rwy. Co. (Washington and Oregon)	38	72	3,509,000	17	631,000	3	230,000
Total	331	430	13,601,000	286	11,149,000	27	1,094,000
Percentage of whole number	....	57.9	....	38.5	....	3.6	....

The grand total is, 743 elevators, having a capacity of 25,844,000 bushels, averaging 34,756 bushels each.

4. SPECIAL REPORT ON THE CORN MOVEMENT TO CHICAGO.[1]

(1) CONDITIONS OF MARKETING CORN IN THE WEST.

In order to arrive at any definite understanding concerning the relative proportions of the consumer's price for corn (and the same is true of all cereals) it is necessary to know the conditions under which it moves from the producer to the consumer. In the large corn-growing districts of the West that commodity is practically sold by the producer in the ear. A considerable portion of it is disposed of by him at the primary market in that form, from 70 to 80 pounds being taken for a bushel, according to condition. In districts where wood is scarce, and, as a consequence, fuel high, many farmers prefer to shell their corn so as to retain the cobs for fuel, but as this is never done until the corn is to be hauled to market, the shelling charge, which is ordinarily 1 cent per bushel, is really a part of the intermediate expense between the producer and the consumer.

The next item of expense is that attaching to the local market. At nearly all railroad stations throughout the West are located elevators and shovel houses ranging from 500 to 20.000 bushels' capacity, and at all of them are buyers ready to take the grain and pay the market price therefor as it is delivered by the wagon load. These elevators, which are sometimes owned by the railroad companies, oftener by grain concerns located at the larger markets, and quite frequently by the individual buyers, are always operated independent of any railroad connection. They usually stand upon railroad ground which, as also is the case with the elevator when owned by the railroad. is leased to the operator at a nominal price. The shovel houses are also usually located on the railroad right of way under the same conditions. At such station as neither elevators nor shovel houses are provided, grain is loaded by shoveling direct from the wagon to the cars. Practically all grain that comes to market is purchased by the dealer at these local markets. The farmers rarely ship any grain on their own account. The buyers usually pay such prices as will allow them about 2 cents per bushel for their expenses and profit.

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[1] Reported by Mr. James Peabody, special agent, Chicago, Ill.

All of the dealers at each of these local markets are constantly in touch with the central markets. They receive quotations by wire every day, so that they know the price of grain in Liverpool, New York, and Chicago. Formerly the majority of these buyers shipped to commission houses at the central market, but latterly this practice has been largely abandoned. Fully 80 per cent of the grain that now moves to the markets is bought by the large grain concerns. These houses, located chiefly in Chicago and St. Louis, send out direct and through their various branches at western points, postal-card bids in practically the same form as the one appended:

> CHICAGO, ——.
>
> We will pay the following prices for grain on track —— your station shipment, —— days; if shipped later acceptance at our option:
>
> 2 mixed corn............................
> 2 yellow corn...........................
> 2 white corn............................
> 3 mixed corn............................
> 3 yellow corn...........................
> 3 white corn............................
> 3 white oats............................
> 2 mixed oats............................
>
> Acceptances to be received by us before 9.30 a. m. next trading day.
>
> We reserve the right to reject amounts in excess of 10,000 bu.
>
> Bill all cars to Santa Fe Elevator, care A., T. & S. F. R. R., unless otherwise instructed.
>
> Acceptances by carload will be confirmed at the rate of 625 bu. per car corn, 1,250 bu. oats.
>
> Shipper pays weighing and inspection.
>
> RICHARDSON & COMPANY,
> *Incorporated, 37 Board of Trade.*
>
> Manifest errors excepted.

So universal is this custom that every local dealer throughout the country is in daily receipt of one or more of these bids, and so advantageous does he find this practice that rarely any other method of selling is now employed. He finds that he can get from 1 to 3 cents per bushel more by disposing of his grain in this way than by sending it to market for his own account. This is chiefly owing to the adjustment of freight rates. An illustration of the present condition (July, 1900) will serve to make this clear. The rate on corn from Hutchinson, Kans., to Chicago is 24.5 cents per hundred pounds, and the rate from Chicago to New York is 13.5 cents, or a total of 38 cents through. The rate from Hutchinson to the Mississippi River crossing is 19.5 cents and from the river to New York 17.5 cents, or a total of 37 cents through. The rate from the river to New York on export grain is 15.5 cents, which makes the through rate on grain for export 35 cents. Again, the lake and rail rate from the Mississippi River to New York is 14.9 cents, which, added to the rate from Hutchinson to the Mississippi River, makes 34.4 cents through. To still further complicate the situation it frequently happens that the lake and rail rate from Chicago varies with the demand for bottoms, so that a still further reduction in rates may be made by using the proportion accruing to the lines between the Mississippi River and Chicago to the last-named point and adding same to whatever may be the current rate from Chicago to the seaboard. It will be readily seen that as it is impossible for the local buyer in the West to take advantage of these varying conditions, it is much better for him to dispose of his holdings and current purchases at the daily bids of which he is in receipt, and which are invariably more than he can realize by shipping direct to the central markets.

(2) Prevailing Charges for Corn Transportation.

The following table of rates, which are fairly representative of those in existence throughout the West, will convey an idea of the prevailing charges for this class of transportation:

	Chicago rate.		Mississippi River rate.		Kansas City rate.	
	Miles.	Cents.	Miles.	Cents.	Miles.	Cents.
Millsdale, Ill	50	4				
Vernon, Ill	75	5				
Ancona, Ill	100	6				
Wilbern, Ill	125	6				
Monica, Ill	150	7				
Knox, Ill	175	8.08				
Ponemah, Ill	200	9.05				
Lomax, Ill	225	10				
Argyle, Iowa	250	12	15	6.09		
Wyaconda, Mo	275	14	40	8		
Kenwood, Mo	300	14	65	8		
Biddle, Mo	325	14	90	8		
Marceline, Mo	350	15	115	10		
Dean Lake, Mo	375	15	140	10		
Norborne, Mo	400	15	165	10		
Floyd, Mo	425	15	195	10		
Kansas City, Mo	450	16	215	11		
Wilder, Kans	475	16	240	11	20	4
Lawrence, Kans	500	17.5	265	12.5	45	6.5
Topeka, Kans	525	18	290	13	70	7
Osage City, Kans	550	19	315	14	95	8
Emporia, Kans	575	20	340	15	120	9
Elmdale, Kans	600	22.5	365	17.5	145	11.5
Horners, Kans	625	23	390	18	170	12
Mission, Kans	650	23.5	415	18.5	195	12.5
Hutchinson, Kans	675	24.5	440	19.5	220	13.5
Alden, Kans	700	25	465	20	245	14
Great Bend, Kans	725	25	490	20	270	14
Larned, Kans	750	25	515	20	295	14
Bellefont, Kans	775	26	540	21	320	15
Dodge City, Kans	800	26	565	21	345	15

(3) Effect of the System on Farm Prices.

Accompanying this statement are a number of tabulated forms based upon the Chicago current market, which show the result of these combinations of freight rates. Taking Hutchinson again for the purpose of illustration, it will be seen that although at the regular rate, transportation charges alone from Hutchinson to Chicago are equivalent to 13.72 cents per bushel; that by taking advantage of the lake and rail rate and the export rates the cost is reduced so that the combined expenses between the producer and consumer amounts to only 13.56 cents per bushel. It often occurs that because of a local demand at some point—such, for instance, as prevails in California at this time—higher prices can be obtained than are current in the general market. The bids sent out on July 25, 1900, for this purpose, were on the basis of 35 cents per bushel at Kansas City, which was only 4 cents less than the Chicago market on the same date.

The important thing in this connection is that the producer invariably gets the benefit of these rate combinations. As the business is now conducted the large dealer at the central market, through his offers to the local buyers, practically acts as the agent of the producer by offering to pay at the local market the highest price obtainable anywhere, modified by the lowest combination of rates to such highest market. It not infrequently occurs that the differences between the prices so obtained and what would result if the producer forwarded his own grain to market at the regular rate amounts to nearly, if not quite, 5 cents per bushel. The popular impression is that the large grain dealers and the railroads combine to rob the producer, whereas the truth is that in his anxiety to do the largest possible amount of business the buyer seeks, through ingenious combination of rates, to secure the lowest through rate, so that he may pay the highest possible price at the local market. His profits, although generally large in the aggregate, are very small per bushel. The local dealer who operates an elevator can not, on the limited amount he handles, pay expenses on less than 2 cents per bushel, on the average, but the large buyer at the commercial center, whose deals run up into the millions, is content if he can get from one-eighth to one-quarter of a cent per bushel.

As already suggested, all kinds of grain are handled on practically the same method, only such variations being introduced as will best meet attending conditions. Large quantities of wheat, for illustration, are handled in the Northwest and to some extent throughout the West generally on what is known as the "Milling in transit" privilege. Under this arrangement wheat contracted through from the local market to New York, Boston, and sometimes to foreign destinations, is stopped in transit at Minneapolis or some other milling point, and the equivalent tonnage in flour is forwarded to destination without extra charge. The method by which this is done is for the railroad to charge and collect its local rate up to the milling point, issuing a receipt for such charges, and when the car of flour is shipped out the railroad, upon presentation of this receipt, bills the flour to destination at the difference between the amount already paid and the through rate as contracted. It will be perceived that in this case, as with the corn shipments, the benefit accrues to the producer, as the dealer in his anxiety to do the largest possible business pays the utmost that he can afford. Generally speaking, commercial combinations do not inure to the benefit of the producer, but in the case of grain such appears to be the fact. The American product meets the world's competition in foreign markets on favorable terms, and usually with great success, with the result that because of the cheapness of transportation and the acumen of the grain merchant the American producer gets very much more for his labor than the inhabitant of any other country on earth.

(4) STATISTICAL RESULTS FOR EIGHT SHIPPING POINTS.

The following figures show what proportion of the Chicago value of corn, shipped from eight representative producing sections to Chicago, goes to the producer and the distributers:

Prices and expenses of distribution of corn.

Year and month of sale.	Kind and grade of product.	Consumer paid at Chicago (cents per bushel).	Producer paid (cents per bushel).	Combined expenses of distribution between producer and consumer (cents per bushel).	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.	Remarks.
1900.							
July 25	Corn	39	25.44	13.56	34.8	65.2	From Hutchinson, Kans.
Do	do	39	25.72	13.28	34	66	From Salina, Kans.
Do	do	39	31	8	20.5	79.5	From Media, Ill.
Do	do	39	32.62	6.38	16.3	83.7	From Benson, Ill.
Do	do	39	24.28	14.4	37	63	From Dodge City, Kans.
Do	do	39	26.28	12.72	32.6	67.4	From Peabody, Kans.
Do	do	39	26.28	12.72	32.6	67.4	From Marion, Kans.
Do	do	39	25.16	13.84	35.7	64.3	From Greatbend, Kans.

SUMMARY.—From these figures it appears (1) that the combined distributive expenses of handling corn from Kansas shipping points to Chicago, where the greater bulk of the corn from trans-Mississippi points is marketed, is equal to one-third of the value of the corn to the consumer at Chicago. The producer gets two-thirds of this value. (2) That the distributive expenses for handling from Illinois points to Chicago on the average amount to one-fifth of the Chicago value. The Illinois producer gets the other four-fifths.

5. GRAIN-ROAD RATES TO CHICAGO COMPARED.

We have now to examine rates to primary markets to see whether in actual practice they have tended to decline and, if so, to what extent.

Among the grain-carrying roads centering at Chicago and radiating into the grain district on both sides of the Mississippi River there is an unequal decrease in rates from 1880 down to 1897. The five roads compared are all great grain carriers from farm to primary market. They carried 72 per cent of the receipts at Chicago in 1898.[1] They are therefore fully representative of the western grain movement and their tonnage is primarily grain tonnage.

---

[1] Chicago Statistics of Trade and Commerce, 1898, p. 5.

The following table gives the average rates per ton per mile on each road:

Average rates per ton per mile, in cents.[1]

Year.	Chicago, Rock Island and Pacific Rwy.	Chicago and North-western Rwy.	Chicago, Milwaukee and St. Paul Rwy.	Chicago and Alton R. R.	Chicago, Burlington and Quincy R. R.[2]
1865	1.985	2.291	2.376	2.220	1.788
1870	2.316	2.608	2.380	1.963	2.028
1875	1.688	1.707	1.833	1.650	1.658
1880	1.209	1.490	1.749	1.206	1.077
1881	1.220	1.470	1.704	1.241	1.156
1882	1.281	1.470	1.481	1.253	1.091
1883	1.170	1.427	1.391	1.128	1.032
1884	1.097	1.309	1.293	1.008	.973
1885	1.043	1.194	1.278	1.009	.956
1886	1.071	1.193	1.168	.961	.919
1887	1.012	1.102	1.089	.946	.879
1888	.964	.983	1.020	.973	.789
1889	.971	1.013	1.067	.525	.867
1890	.995	.977	.995	.898	.813
1891	1.039	1.028	1.003	.980	.862
1892	1.055	1.013	1.026	.973	.851
1893	1.039	1.028	1.026	.919	.815
1894	.989	1.080	1.037	.974	.783
1895	1.084	1.137	1.075	.994	.770
1896	1.017	1.020	1.003	.925	.741
1897	.958	.978	1.008	.891	.784

[1] Bulletin No. 15, Miscellaneous Series, U. S. Department of Agriculture, p. 20 (1898).
[2] Portion east of the Missouri River.

The extent of this decline of rates on grain roads is given below in cents per ton per mile and in percentages.

Year.	Chicago, Rock Island and Pacific.	Chicago and North-western.	Chicago, Milwaukee and St. Paul.	Chicago and Alton.	Chicago, Burlington and Quincy.
	Cents.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
1880	1.209	1.490	1.749	1.206	1.077
1897	.958	.978	1.008	.891	.784
Reduction in 17 years	.251	.512	.741	.315	.293
Percentage of reduction from 1880 to 1897.	20	34	42	26	27

The relation of the tendency of falling rates on grain to the corresponding tendency in farm prices of grain is indicated in the diagram on page 61. The rates on grain-carrying roads have fallen from 27 to 74 per cent. There has been a fall in farm values of cereals almost parallel with the fall in rates of freight on three railroads compared. But, if we take the three other grain roads into account, and compare them with farm prices during this period, we see that the fall of rates per ton per mile on the Chicago, Milwaukee and St. Paul and on the Chicago and Northwestern systems was from 52 to 74 per cent, while the farm prices of wheat fell 41 per cent and the farm prices of corn and oats 34 per cent. Railroad rates have, therefore, in three roads declined evenly with farm prices and in two others have declined a good deal more rapidly than farm prices since 1880.

A comparison of grain-road rates with rates on four coal and four cotton roads elicits the fact that both of these classes of carriers have reduced their rates in the period under consideration to a greater extent than have the grain roads.

COAL ROADS.[1]

Railroads.	1880.	1897.	Reduction.
			Per cent.
Norfolk and Western	1.443	0.446	70
Lehigh Valley	1.155	561	51
Delaware, Lackawanna and Western	1.552	.869	44
Pennsylvania	1.997	.914	54

[1] Bulletin No 15, Agricultural Department, pp. 21–24.

COTTON ROADS.[1]

Railroads.	1880.	1897.	Reduction.
			Per cent.
Mobile and Ohio	2.205	0.693	68.6
Central of Georgia	3.039	1.205	60.4
Seaboard and Roanoke	3.505	1.714	51.1
Southern	2.16	.976	54.8

[1] Bulletin No. 15, Agricultural Department, pp. 21-24.

6. RELATION OF CEREAL PRICES AND RAILWAY RATES.

Prices and rates are subject to different sets of influences, which cause them to vary. There are in the agricultural situation conditions which enable prices of farm products to recover, on account of scarcity of supply, for example, at home, or deficiency abroad. In the railway-rate situation there are no similar conditions; consequently the competition of carriers and the rivalry of markets in their constant efforts to control freight movement from grain territory succeed in steadily lowering railway rates.

The diagram opposite illustrates this permanent contrast in the movement of prices and rates year by year, from 1867 to 1896. The rates are the average rates per ton per mile for railroads of the United States.

7. LOCAL GRAIN DEALERS IN DISTRIBUTION.

In many parts of the Western grain territory grain buying at the country station was formerly conducted by the local merchant. To him the farmer sold his grain or consigned it on commission. Of him terminal dealers bought. In the course of time the competition of terminal dealers became so keen that they leased or erected elevators and put their own buyers in charge. In many localities the local merchant ceased to act as a grain dealer, disappearing entirely as such, and his place was taken by a local firm that devoted itself more or less exclusively to buying and shipping grain to primary markets in season. These two organizations now dominate the grain movement in its incipiency. Possibly 95 per cent of the cereal movement passes into the control of the line elevator companies and of the members of the grain dealers' associations on its way from the farmer's hands to the primary market. The present organization of the grain movement is such that the isolated producer finds two highly organized sets of buyers at his local market.

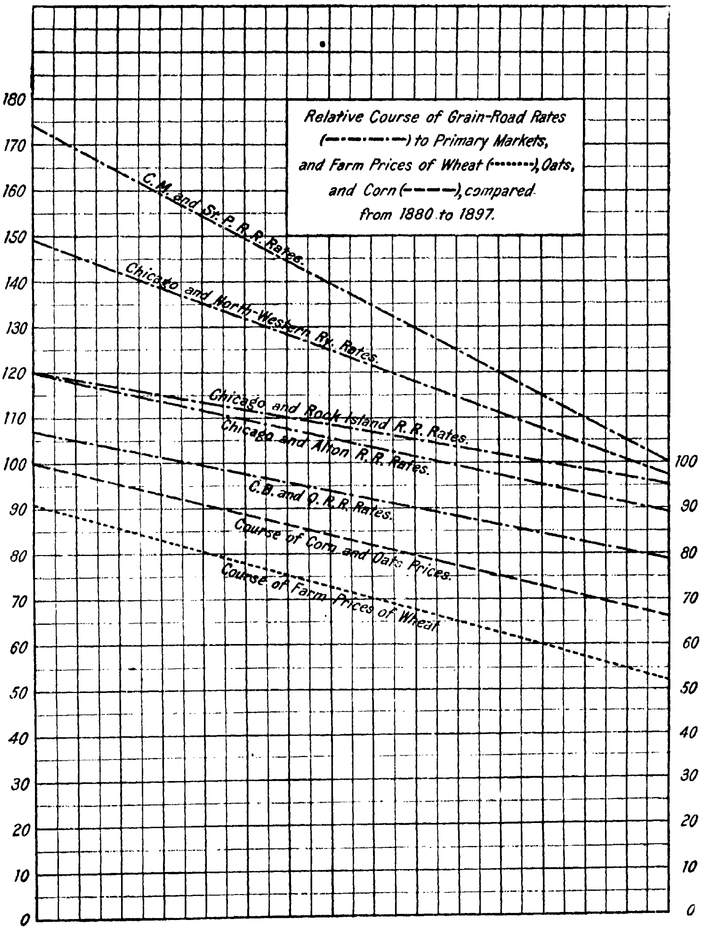
There is, of course, a great deal of grain still consigned directly by the producer on a large scale from local shipping points to commission merchants at the primary markets outside of Chicago; but this practice tends to disappear in the presence of these two commercial agencies—the line elevator companies and the grain dealers' associations. Both of these agencies deal directly with the producer and tend to prevent his entering the terminal market at his own risk. We speak now of the great majority of small producers rather than of the few "bonanza" farmers, whose role is already a diminishing one and is destined to disappear in the not distant future.

These associations came into existence as a natural result of the progress of line elevators, because of the difficulty of the individual elevator owner in getting favorable terms from the railroads, and owing in no small degree to the necessity of some united action on the part of the trade in raising the standard of the quality of grain before receipt by the trade.

Railroads would do for a compact body of local dealers, whose elevators comprised half or more of the number along the line, what they would not do for individual dealers acting alone. One of these associations has reported a membership of 299 dealers, who control or represent 666 elevators, the capacity of each of which establishments may be not less than 15,000 or 20,000 bushels of grain. One can very easily appreciate the effect of such an organization upon railway practice, especially when it is possible for those located at competitive points to turn over their shipments to either of two roads that would give them the best treatment. The members of the associated elevators at competitive points, by acting with those at noncompetitive points, could readily secure concessions from the carriers for the entire associated membership in the business.

Possibly no better method of correcting abuses in grading, excessive dockage at terminals, and other injustices practiced by grain-receiving centers could have

been devised than that of associated action on the part of local dealers throughout the grain-shipping districts. The Nebraska Grain Dealers' Association, whose membership of 700 operates 900 elevators, was organized to meet these very troubles which arose in attempting to regulate the manner in which the country dealer's business was handled at terminals. These terminal questions, especially as regards weights, were at one time very aggravating questions. Terminal practices have been greatly improved as a result of the efforts of these associations. They have, on the other hand, also exerted favorable influence upon the producer by insisting that farmers should bring their grain in the best marketable condition. The earlier practice of nearly all buyers accepting wheat regardless of the dirt, "cheat," or other foreign seed it contained was successfully discouraged by such associated action. Thrashers throughout the country had grown careless in their work and were allowed to do so by farmers because the grower realized that the dirt and foreign seed would sell for as much as the wheat. To correct this abuse, sieves have been introduced in order to test the amount of dirt the wheat contained. The wheat alone is, of course, paid for. In this way the standard of cleanliness, and purity has been raised. The thrashers have been



obliged to conform to a higher commercial standard, and a premium has been put upon the better preparation of the grain for market.

The commercial value of such services is by no means insignificant. It has been a constant complaint, both at primary grain markets and elsewhere, at home and in Europe, that dirty wheat prejudices the price paid the producer. Cleaning establishments have been required at large centers of accumulation on this account. In general, associated action has the effect of improving the grade at which such grain is accepted by grading authorities East and West alike.

The policy of these associations has of course been one of self-preservation. Their successful assertion of localized interests throughout grain-shipping territory, as against the interests of the centralized system of line elevators, is in itself evidence of its helpful economic efficiency in preventing a monopoly of grain handling by line elevator companies.

But their greatest service to themselves and to local shippers generally has been improvements in weights. The practice has long prevailed in Western grain territory of shipping carloads of grain to terminal markets from country stations subject to losses and deductions which terminal receivers might see fit to make. The railroads refuse to be responsible for leakage. United action by local grain dealers against arbitrary dockage has resulted, it is claimed, in an improvement of one-fourth of a cent per bushel in price from this practice alone, and an equal amount in other respects. This is of course a decided gain to all shippers, and ultimately inures to the benefit of the grower by eliminating risk of deduction on the dealer's consignment.

Finally, it must be evident that such organizations can not fail to have an influence upon railway rates on grain to terminal points. The protection of its members from arbitrary freight rates is one of their objects. An association operating in Texas, for example, has during the past year secured reductions on both State and interstate shipments of oats and corn varying from $3 to $16 per car.

The charge for recleaning is from 1 to 2 cents per bushel, and the expense of storing, loading, and shipping is about 2 cents per bushel. This rate of handling grain at local elevator points seems to be quite general.

Complaints on apparently good grounds have been made against the grain associations of the various States for attempting to compel the farmer to sell to their members instead of consigning his grain to a firm in such cities as St. Louis, Kansas City, or Chicago. Where farmers have shoveled their grain from the wagon directly into the car without passing it through the local grain elevator the grain-dealing firm to which such car is consigned has been made the object of a systematic boycott by the entire membership of the local elevator association. A local shipper not using an elevator, but loading directly from wagon to car, is a "scalper" in the terms of the association. He is guilty of not being "regular;" that is, of not conducting a "regular and steady business of buying and selling grain." Systematic effort is made to trace cars loaded thus "irregularly" to their destination and then to post the names of offending receivers. The offense of the farmer seems to be that of evading the elevator charge of 2 cents per bushel by shoveling grain from wagon to car. The dealer who handles grain thus loaded is made the object of a systematic boycott.[1]

Of course, the object of this procedure is to get rid of local handling of grain by persons who are not regularly in the business and have no facilities for handling the crop, but who see an opportunity, when the market is good, to profit by buying and shipping independently of the local elevator people. These methods do not stop with this class alone, but extend to independent dealers fully established in the trade but not deemed "regular." At Malcolm, Nebr., an independent dealer, who had been in the grain business for 7 or 8 years, and had about $15,000 invested in the business, was posted as a scalper for shipping 2 carloads of corn to an Illinois farmer for feeding. A Malcolm dealer—a member of the association, we are reliably informed—traced the 2 cars and offered corn to the Illinois farmer cheaper than it could be bought in Nebraska, thus showing the methods to which this combination of economic interests resort in order to eliminate independent dealers deemed "irregular."

The following official letter is self-explanatory in this connection. It is addressed to the firm in St. Louis which, it was believed, handled the shipment mentioned above, but which, as a matter of fact, did not handle it.

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[1] Scoop-shoveling methods might, if generally resorted to in busy seasons, no doubt be to a considerable extent responsible for scarcity of cars, owing to the much longer time its takes to load a car from the wagon than from an elevator. Hence both railroads and elevators have very properly and justly insisted that in busy seasons of crop moving there should be a maximum limit allowed within which the loading had to be completed after delivery of the empty car.

[Copy.]

OMAHA, NEBR., *6/5/00.*

BARTLETT GRAIN CO., *St. Louis, Mo.*

GENTLEMEN: Some time since I wrote you with reference to shipments being made you by a scalper at Malcolm, to which letter I have failed to receive reply. As sufficient time has been granted you to make answer to my letter, it now becomes necessary for me to bulletin this matter to the regular dealers of this State. I have no desire, however, of placing you in an unfavorable light before them, which your silence will certainly do, and would prefer to have a statement from you outlining your disposition toward the regular trade. Should the matter be bulletined to the trade, I doubt very much if any of the 700 elevators out of the 800 in the State would ship you any further grain.

Yours, truly,

A. H. BEWSHER, *Sec'y.*

At a meeting of one of these associations on April 11, 1900, the Crescent Mills, of Denver, Colo., and the Purcell Grain Company, the Southern Grain Company, the W. T. Redmon Corn Company, and the Dunning Grain Company, all of Kansas City, were listed as firms with which members of the dealers' associations were to have no dealings. The following motion was reported as carried at this meeting:

"That all members of this association absolutely refuse to do business with a firm bulletined as encouraging scalper business until a correction has been issued from the secretary's office."

Further correspondence bearing on this subject has been submitted.

[Copy.]

Confidential Bulletin No. 4.

OMAHA, NEBR., *Mar. 24th, 1900.*

To Members N. G. D. A.:

Below I hand you correspondence just closed for your consideration:

OMAHA, NEBR., *3/16/00.*

CRESCENT FLOUR MILLS, *Denver, Colo.*

GENTLEMEN: Some time since I had some correspondence with you with reference to shipments being made you by E. Loosebrock, of Petersburg, Nebr. At that time we were of the opinion that your interests in Nebraska were with the regular trade. As you promised to write the gentleman, as we supposed, informing him of the fact that your interests were with the regular trade, we gave you the benefit of the doubt. We are now advised of shipments of two cars, Nos. 55,653 and 56,712. It becomes my duty to inform all regular dealers of the State of Nebraska of these shipments, and until you make satisfactory explanation to them their shipments will be withheld from you. Not wishing, however, to do you an injustice, we will withhold our bulletin to give you an opportunity to reply to this letter. Do you care to state your position to the regular trade?

Yours, truly,

A. H. BEWSHER, *Sec'y.*

DENVER, COLO., *Mar. 21, '00.*

MR. A. H. BEWSHER, *Omaha, Nebr.*

DEAR SIR: Yours of the 16th at hand and carefully noted. Will say that when we received your former communications we were not fully aware that Mr. Loosebrock had an elevator. Since then we have heard from him that he has an elevator, and as our dealings with the gentleman have been entirely satisfactory we can see no reason why we should not continue buying from him. We can see nothing in his dealings which leads us to doubt the *regularity* of his business, though it may be that he does not belong to the grain trust.

Yours, respectfully,

CRESCENT FLOUR MILLS.
A. S. KING, *Mgr.*

In explanation of the above, beg to state that E. Loosebrock operates an elevator, but he has no track facilities, having been denied a site by the R. R. Co., owing to there being already as many elevators as it was thought the business of the point would justify—namely, three. Notwithstanding the action of the R. R. Co. in refusing Mr. Loosebrock a site, he built his elevator a considerable distance from the track, and is consequently obliged to haul his stuff from elevator to cars in wagons and scoop from same, the method practiced by any ordinary scalper. Being without the proper facilities our constitution requires, he is not and can not be considered regular by us.

Anyone receiving this notice who has done business with the Crescent Flour Mills in the past will confer a favor by advising me of the fact, and very much oblige,

Yours, truly,
A. H. BEWSHER, *Sec'y.*

[The Grain Dealers' Union of Southwestern Iowa and Northwestern Missouri. D. Hunter, president, Hamburg, Iowa. E. H. Vanschioack, vice-president, Elliott, Iowa. G. A. Stibbens, secretary, Coburg, Iowa. J. B. Samuels, treasurer, Riverton, Iowa. Governing committee: F. M. Campbell, Randolph, Iowa; Ed. F. Rose, Coin, Iowa; J. D. Young, Anita, Iowa; J. R. Harris, Northboro, Iowa; G. H. Currier, Prescott, Iowa; John Sandham, Harlan, Iowa; J. L. Gwynn, Imogene, Iowa.]

COBURG, IA., *Mch. 31, 1900.*

DEAR SIR: A. J. Marsh, Shenandoah, Ia., is not a member of the union and not a regular dealer. He will probably be asking for bids and may consign some grain from Bingham, Ia. Mr. Marsh asked Mr. Hunter if he consigned any grain would it receive fair treatment or would it be discriminated against. Mr. Hunter told him it would certainly be treated fairly, but all com[mission] houses, being members of associations, they would surely notify him they did not desire any more of his shipments. Mr. Hunter done this to relieve the com[mission] people from any delicacy in writing him to that effect, and he will expect that kind of a letter. Thanking you in advance, I am,

Yours, truly,
G. A. STIBBENS.

The practical effect of this policy is to drive the business of handling grain locally into a highly organized class of tradesmen, and to deprive producers or any group of producers not regularly in this business from loading their own grain and consigning their products directly to commission merchants or other grain dealers in the central cities. This is but one effect. The other effect is to enforce grain merchants at the great markets to deal only with the "regular" elevator men. How far this has already gone is expressed by an official organ of the grain-dealing interests, the Grain Dealers' Journal. It discloses the real situation of the independent shipper, the shipping producer, or the independent consignee, when it says:

"The irregular grain shipper is finding it more and more difficult to get anyone to handle his business. The irregulars are becoming so scarce that those who handle their consignments can hardly expect to receive more than 1 car a month from all quarters."[1]

It would seem highly advisable from the standpoint of both dealer and carrier that such agencies should be welcomed in any field of commercial activity where so much improvement has long been wanting. It is certainly to the advantage of the producer that the country elevators be not permitted to fall into the hands of the line-elevator firms to the exclusion of all competitors; and the union of local dealers seems to have been the only way by which this could have been accomplished.

On the other hand, the practical effect of this policy of boycotting "irregulars" is to shut off the producer from direct access to central markets. It may be highly desirable to get rid of "irregular" dealers both for the good name of the trade and for the encouragement of investment in elevating facilities at any one point. But when the verdict of "irregularity" is used to cut off the producer from access to the market or to punish nonmembers of the association, it is doubtful whether such organizations have not exceeded the limits of their legal rights as well as gone beyond the range of economic usefulness. On this account evidence laid before us contains assertions that these associations of dealers wield a power greater than that of the "Big Four" firms of grain dealers in Chicago, which control the leading systems of line elevators on the principal grain roads centering in that city.

The besetting sin with all efficient and useful trade combinations is that sooner or later they yield to the temptation of trying to prosper by employing coercive methods rather than by reducing the cost or improving the quality of service rendered through progressive economies in methods. The case in hand is no exception, it would seem, to this rule, although there is nothing in the constitution and by-laws of these associations to which exception can be taken. For example, the Nebraska Grain Dealers' Association expresses its apparently laudable purposes in its preamble, as follows:

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[1] Issue of May 10, 1900, p. 277 (Chicago).

"We, the undersigned, being regularly engaged in the buying and selling of grain, and recognizing the necessity of an association of grain dealers, do hereby associate ourselves in an organization the object of which shall be the advancement and protection of the common interests of those regularly engaged in the grain business, the formulating of rules for the transaction of business, and the promotion of friendly relations among legitimate grain men of the State."

Nor does there appear to be anything in the terms defining elegibility to membership that does not commend itself:

"1. Any person, firm, or corporation conducting a reputable, regular, and continuous business of buying and selling grain, and having proper facilities for handling same, may be admitted to membership in this association.

"2. Any regular grain receiver, track buyer, terminal elevator, or commission merchant who conducts a reputable business and confines their business to the regular elevator operators shall be eligible to membership on the payment of regular fees and shall be rated the same as the owner of one elevator."

Nevertheless, the correspondence of some of these grain-dealing associations reveals a system of prejudicing their entire membership against terminal buyers which might well be made the subject of legal investigation. The posting of a firm's name as having "shown an inclination to encourage scalpers" is morally, if not legally, a conspiracy to eliminate competitors, especially when it is accompanied with an official threat that unless such liberty to buy directly from the producer is abandoned the entire trade of hundreds of elevator owners in a given State will be urged to withdraw from any dealings with such commission merchant.

8. THE COMMISSION MERCHANT'S SIDE OF THE CASE.

The following communication indicates the attitude of the grain commission merchants toward local grain-elevator combinations in the territory tributary to Kansas City and St. Louis. It is the result of an inquiry conducted by one of the special agents employed to ascertain the terminal commission merchants' side of the question.

APRIL 27TH, 1900.

JOHN F. CROWELL, *Expert Agent, New York, N. Y.*

DEAR SIR: I am in receipt of your favor of the 24th inst. relative to grain dealers' union.

Question 1. Their profit is now from one to two cents, and they figure they can increase it to four cents per bushel.

Question 2. They gain control by buying, and those whom they can't buy they apply the boycott to, as was shown in the correspondence I sent you. The man at Petersburg, Neb., says the combine offered him more than the value of his elevator and a position with them to get him out of the way. He says he is going to bring suit against them in the next ten days.

Question 3. The farmer is forced to take his grain to these elevators, as the commission men fear the boycott and do not want his business. If an independent buyer who has no elevator to keep up starts to buy at these stations, the combine bid up the grain so he makes no money, and apply the boycott, which completes the dose.

I am told that Nye, Snyder & Co., Crowe Lumber Co., and the Trans-Mississippi Grain Co. (Bartlett, Frazier & Co., of Chicago) practically control the stations on the F. E. and M. V. Ry. in Nebraska at the present time, and the other roads will be covered soon in the same manner.

With only three firms on the long road they divide the business and each one has his own stations where he bids, and the farmer either accepts his bid or keeps his grain.

In 1899 a bank at Hastings, Neb., came into possession of four cars of wheat, very likely by a mortgage on the crop. The buyers at Hastings refused to buy the wheat and the bank consigned it to the Woodson & Young Grain Co., of Kansas City, who sold the wheat on commission, and as a result were posted by the union as dealing with scalpers and the boycott should be applied.

The combine is of such power that the commission men are afraid of it and dare not antagonize them, although they will have no business soon as the buyer will soon control the market, especially for export, and competition will be stifled.

This is not a "Populist harangue," but a statement as given me by grain men who have been in the business for years both in country and city trade.

Yours, respectfully,

(Signed) ——— — . ——.

The commission grain-dealing interests at terminal markets are inclined to regard themselves as standing between the upper millstone of the terminal elevator interests or line elevator warehousemen on the one hand, and the lower millstone of the local grain dealers' associations on the other hand. At Chicago commission merchants are feeling the pressure from above; elsewhere the same interests are complaining of the pressure from below. Cooperation or combination among commission men does not appear to have been resorted to as a means of self-preservation to the extent shown in the case of either the local grain dealers or the line elevator companies.

9. THE LINE ELEVATOR COMPANIES.

Of about 320,000,000 bushels of grain received at Chicago, by far the larger part is handled by a few firms located at Chicago, and which own, lease, and operate hundreds of country elevators on the lines of the railroads branching out into the western and northwestern grain fields. The same may be said of Duluth. From the latter point, on the Northern Pacific lines, the line elevator companies control 430 elevators out of 743, local dealers control 286, and farmers' associations but 27.

The producer's capacity to take care of himself in this respect is insignificant. Farmers and local dealers together control 42 per cent of the local grain-receiving facilities on this road. The rest are in the hands of the several buyers who have storage capacity at the central market. In Chicago 28 or 30 of these terminal elevators are controlled by 7 or 8 firms. On the Chicago and Northwestern Railway Company's lines there are 1,126 country elevators. Terminal warehousemen own 521 of these, or nearly half; 577 belong to local grain buyers, and 28 to the farmers' associations.

The purpose of terminal warehousing companies in entering into the farm market is of course to get control of the grain crop. This control has to be secured within the course of 3 months between harvest and the end of the year. Within this time three-fourths of the crop of wheat passes into the market. The producer is so situated financially that he must sell early, as a rule. The warehouseman is interested in keeping his warehousing capacity occupied. To make sure of getting grain he stations his own buyer at the country shipping station in charge of his own local elevator. This local buyer receives instructions from the central office as to the prices to pay. At each railway shipping station there may be 2 or 3 line elevators. In the Northwest there are 3 of these in each important town, each of which represents one of the larger warehousing firms as a local buyer.

The policy of these different companies is not to compete one against the other. To a certain extent these firms have divided out the country among them, so that each operates a line of local elevators in a more or less exclusive territory as far as the terminal companies are concerned. The policy, furthermore, among these firms is to buy out the local elevator. On the Union Pacific road west of Kansas City the Peavey Company, of Minneapolis, builds its own elevators where it can not buy. This policy is more or less general on the part of the leading line companies. The purpose is to get control of the crop at its sources.

These seem to be the essential facts bearing on the country elevator situation. The tendency is for these agencies in the movement of the crop to fall into the hands of a few leading firms. The local firms in control of elevators often find it to their advantage to sell on the track at the local station to the very firm represented at that point by a line elevator. It would seem that the price paid the producer under these conditions might readily be a monopoly price determined by a common understanding among the few leading firms at the primary markets operating their various lines of elevators.

Can these large firms really fix prices? Whether they do or not has never been proven. If they attempted to do so, could they really do it? And if not, why must they fail? Suppose, for example, that 4 of the foremost warehousing firms at Chicago should attempt on a certain day to fix the price of wheat at 75 cents, delivered at Chicago, subject to the published freight rates between points of origin and that market. If this price is much higher than the relations of supply and demand in the world-market justifies, then dealers in Milwaukee, Minneapolis, Duluth, Peoria, St. Louis, or Kansas City will let the wheat move to Chicago, and the producer will be all the better off for this speculative blunder of the "Big Four." If, on the other hand, 75 cents is much too low, a price in relation to the world-market level, then the other terminal markets are presumably wide-awake enough to see that there is a good margin of profit in taking wheat at enough points higher to get control of it themselves. In either case the price upon which any such a combination of buyers may determine can not be much out of line with the world-market price either one way or the other without either losing their money or losing their power to command the market. In either case the producer will be benefited, in the former case by being paid more for his wheat than the conditions of supply and demand warranted, and in the latter case by receiving more than the combination was bidding because of the competition of buyers outside of the combination.

This line of reasoning applies to the wheat-shipping areas as a whole. It is true that with 10 or 15 primary markets and a large number of railroads reaching out from each, all competing for grain traffic, the terminal buyer must keep close to the world-market level of prices. But it is equally true of a given shipping station at which an understanding may exist as to the price to be paid for the local grain products, and which can not get its grain to market except by one railroad? Is this locality capable of escaping the effects of such an attempt to fix prices? Can noncompetitive points not be sacrificed by the combination of buyers?

If attempts were made to pay a much lower price by even a few cents a bushel at such point than is being paid at competitive points next on either side on the same line of railroad, the natural result would be the investment of independent capital at that point to command part of the grain receipts at a price as high as the combination actually has been paying elsewhere in that locality. Another alternative is to haul the grain to a station at which competitive buyers are to be found.

The actual situation of the producer seeking to market his grain is not, however, so simple as this. Capital will not seek investment on a small scale in the place of a systematized combination. We have seen that the tendency of the grain-dealing combination is to rid out all terminal dealers who do not recognize their authority. That means that more and more the large warehousing firms at primary points, who are in control of line elevators, become the recipients of the local grain dealers' shipments. In other words, an understanding between the line-elevator people and the local grain-dealing combination as to prices paid producers at a given station or line of stations is the logical outcome of the conditions as they now exist.

Facts go to show that this actually occurs with sufficient frequency to recognize the tendency of the two kinds of local buyers to render the farmers' market a noncompetitive one.

Under such conditions the relation of the grain producer to the market is not by any means that of free and open access. Dealers have undeniably been known to act together with line elevator companies to such an extent at local markets as to force farmers to haul their grain elsewhere. Here is an instance set forth in a published document, which we take as typical of a large class of cases in which grain dealers develop an impolitic propensity to oblige the farmer to sell in the cheaper market.

On July 5, 1896, the following petition was filed in the office of the Iowa Railroad Commissioners:

"In the matter of the application of the Primghar Grain Company for an order compelling the Illinois Central Railroad Company to permit an elevator to be erected on right of way at Primghar, Iowa.

"*To the honorable Board of Railroad Commissioners of Iowa.*

"GENTLEMEN: We, the undersigned named citizens of O'Brien County, Iowa, who reside in the vicinity of the town of Primghar, and who make said town their trading point and market to sell grain, respectfully petition and ask that an order be made and entered against the Illinois Central Railroad Company compelling them to allow the Primghar Grain Company, composed of Williams' Brothers and others, to erect and operate an elevator on said railroad company's right of way at Primghar, Iowa, and as grounds therefor state to said commissioners the following reasons:

"First. That the Primghar Grain Company petitioned the Illinois Central Railroad Company for a place to put in an elevator at Primghar and were refused, as shown by letter of C. K. Dixon, superintendent of railroad company, hereto attached.

"Second. That there are only two elevators at Primghar; one is owned by C. E. Achorn, of Sutherland, and the other by the Chicago and O'Neil Grain Company of Chicago, and to the best of our knowledge and belief, said two elevators have combined together and have an understanding and agreement about the prices of grain, so there is no competition and they do not pay the average market price, or as much as is offered for grain at other towns in the county, thereby causing the farmers to haul their grain to Sanborn, Sutherland, and Paulina in order to get the average market price for said grain, greatly to the disadvantage of both the farmers and business men of the town and vicinity of Primghar.

"Third. That the farmers selling grain have frequently been able to get from 2 to 3 cents per bushel more for the same grades of grain at the Achorn elevator at Sutherland than they could at the Achorn elevator at Primghar, and the same condition exists at Sanborn and Paulina over Primghar.

"For the reasons above set forth, and in justice to the farmers and business men of Primghar, we, the undersigned petitioners, ask that an order be entered requiring the Illinois Central Railroad Company to grant right of way of said company at Primghar, suitable for the erection and maintaining of a grain elevator, and to make such other and further orders as by law required in such cases."

(Signed by 85 citizens.)

10. FARMERS' ASSOCIATION ELEVATORS.

There are four direct factors involved in the economic position of the grain producer—the producer himself regarded as an isolated seller, the two systems of local elevators for handling the grain, and the railroads. If the local elevator systems combine against the interest of the producer there is but one effective remedy left—that of the combination of the farmers among themselves to enlist the interest of the railroads in the development of the agricultural resources of the territory they traverse. When local grain dealers and warehousemen act so as to rid the farm market of the elements of competition among buyers the farmer's commercial freedom is a myth, and his only hope lies in a railway policy that will work with them in developing the country without sacrificing agriculture to the interest of short-sighted distributers. The only method of dealing with the modern tendency to combination in any set or sets of economic interest is to meet one combination with an economically more efficient combination. The farseeing managers of railroads are realizing that it pays to develop rather than exploit a community on whose products it is dependent for traffic. It is therefore to the highest interest of the railroad, even though it be in a position to charge monopoly rates, to limit its charges to such an extent as to encourage competitive enterprises which increase the volume of traffic. It can never do this by being party, intentionally or unintentionally, to a local elevator monopoly. Nor can such development of volume of rural traffic be affected by combination between railroads and terminal warehouses operating line elevators regardless of the effect of such collusion on the producing interests; for when industrial hopelessness has been once forced upon the mind of the producer by the feeling that buyer and carrier are victimizing him of the legitimate results of his labor, that very fact reduces the economic output of the producer thus affected far more than railroad managers have been wont to realize. The great grain-carrying roads of the West might to-day be worth twice their present value had their history been one of cooperation and development rather than of conflict and exploitation toward rural interests, by which they were finally forced into receivers' hands.

The history of American railroads shows that the foundation of railway prosperity consists in the good will of the interests on which they rely for their prosperity. Those railroads which have been managed on the opposite plan have usually paid the penalty of bankruptcy as a natural result of distributive short-sightedness.

What effects do the farmers' elevators have upon the relation of the producer of grain to the market?

1. The policy of grain carriers encouraging the erection of farmers' elevators at points where combination practically controls prices marks the beginning of a new era in the relations of farmers and the railroads. There are large districts in the Northwest, in the home of No. 1 Northern wheat, at many of whose stations farmers' elevators are lacking where the local elevator combination with the line elevators control buying from farmers. Wheat is received at the line grade usually, though its quality is so far superior that Western dealers get a premium of from 3 to 7 cents per bushel more than the line-grade price when delivered to Eastern buyers. The first effect of farmers' elevators upon the farmer's interest is to get for him the premium arising from the superior grade of his local product. Where half a million bushels of wheat are shipped it makes a difference varying from $15,000 to $35,000 in the cash receipts of the locality—a sum that might readily be assumed to be equal to all the interest charges on farmers'

indebtedness in that locality. It makes a vast difference, therefore, whether a local shipping point is subject to competitive conditions of marketing its grain.[1]

2. Take the case at which no superiority in grade of grain enters. It is economically certain that neither a local elevator nor a line elevator will pay more than it must to the producer in order to get his grain. The avowed policy of the line-elevator buyer is to keep prices down until the end of the year. Then—in the language of one of their number—"let prices soar, because we have got the bulk of the producers' grain. After January we don't care what the price is."

The producer's situation may be made clearer by the illustration. Station B is 10 miles from Station A on the one side, and equally distant from Station C on the other, with one line of railroad serving them all. At B there is a farmers' elevator, at A and C none except dealers' and line elevators. It is not infrequently the case that where no farmers' elevator is located the price paid the producer is 2 cents lower than at places where such elevators are located. Such being the case, the buyers at A and C would either have to put up their price to the level of that paid at B or let their elevators stand idle at A and C on account of the grain being hauled to B from the vicinity of A and C. The effect therefore of the single farmers' elevator was not only to raise the level of the farm price at one place but at three places.

3. Farmers' elevators increase the purchasing power of the community and thus develop a return railway traffic in excess of that arising from the presence of noncompetitive elevators.

The success of this policy of conserving the competitive character of the local market by erecting farmers' elevators depends on the equitable treatment of all elevator interests on the part of the railroads. Some roads will permit only farmers' elevators on their right of way. Others have thrown obstacles in the way, for various reasons. Enough railroads, however, have accorded producers the right of way for elevators to oblige competing roads to follow suit. It is obviously easier to get such concession at competitive points on a line of railroad than at noncompetitive points, because competing roads increase traffic thereby.

It is equally true that farmers' elevators tend naturally to increase the traffic at noncompetitive points. The presence of a farmers' elevator increases the cash income of the producing population by as much as it raises the price paid for grain sold. This increment in cash income means so much more purchasing power on the part of the locality. Hence, the traffic of the road is increased by the quantity of commodities, which this incremental purchasing power requires for local consumption. The existence of nonproducers' elevators has no such favorable effect on the freight traffic of the road; on the contrary, it has an opposite effect to the extent to which the price paid the producer is less than the competitive price for grain.

4. The increase of farmers' elevators has the further effect of increasing the permanent working capital of the farming community in or near which the elevator is located. The line elevator companies, with which some railroads have been too much enamored for their good reputation, have until quite recently done their financiering from the terminal market, shipping cash daily as required. The lack of local capital prevented farmers building and operating their own elevators. But the financial condition of grain-farming communities has been greatly changed within the past 10 years. Now the local bank can furnish all the active capital required upon delivery. There is no need of borrowing from commission merchants or of depending on terminal warehouses to supply the daily quota of cash needed. This greater degree of financial independence of the producing community has notably increased the borrowing power of an elevator association of farmers. By making themselves jointly responsible for the loan, say, of $1,500 or $2,000, each day's receipts are cashed. By prompt sales and by drawing on each car as soon as loaded, the cash capital required is reduced to a minimum. The financial risk to the bank lending to the elevator association is also minimized and the borrowing rate correspondingly reduced.

5. The practice of giving stockholders in farmers' elevator companies the option of storing their grain at half the rates charged to outsiders is another advantage which this system gives the producer in his relation to the market. As will be shown later, the absence of local facilities for storing grain is in great part responsible for the practice of putting so large a proportion of wheat on the market so soon after harvest as to depress the price and thus enable the speculator to profit by the difference between the low harvest price and the higher price later. Storage at low rates puts it within the producer's power, especially if the practice becomes general, to hold his wheat and thus both to influence the market favorably by withholding it, and to take advantage of that effect by selling. Should

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[1] Report of Mr. John C. Hanley, special agent, Minneapolis, Minn.

the wheat growers of the West approach anywhere near the position of those in the middle and central States in the practice of withholding the crop from the market until late winter, the visible supply of wheat would be reduced to such an extent as to put the producer in a position to realize much of the advance in price that usually follows the main autumn movement of the crop to the primary market.

11. THE TERMINAL ELEVATOR SYSTEM AT CHICAGO.

The key to a proper comprehension of the primary market in grain distribution lies not in the railway systems nor in the local elevator systems, but in the control and operation of the terminal elevator systems. These elevators are the receiving and storing places for the grain gathered into primary markets through the local line elevators and others. By far the larger portion of the visible supply of grain is stored in terminal warehouses operated on a stupendous scale.

The development of the terminal elevator as a feature of grain distribution is one of the most remarkable chapters in our commercial history. The history of the terminal elevator is the history of the primary market, and reveals in its main outlines the inner methods which commercial centers resort to in their effort to control the course of traffic. A primary grain market like Chicago—the storm center of the competitive conflict for control of the grain movement in the Mississippi Valley—knows very well that its supremacy as a distributing center for manufactured products going to rural consumers depends to no small extent upon its capacity to command the raw materials which the agricultural districts exchange for these manufactured products. This far-reaching principle explains the consolidation of distributive agencies in handling grain, as described in the following account of the development of the terminal grain elevators at Chicago. The testimony is that of Mr. John Hill, jr., before the Industrial Commission:

"Chicago is the greatest grain market of the world. For last year the receipts of grain were 320,000,000 bushels. This represents about 9½ per cent of the total crop of grain in this country. One of the most important features of the handling of grain in Chicago is its storage; and it being at the end of the railway lines and the beginning of water navigation, it has become necessary to establish large and numerous elevators here. These elevators were first built in the fifties; possibly as early as 1848 there was an elevator in Chicago. As the Western roads brought grain to Chicago and as the grain business increased, they all, or nearly all, built railway elevators or built elevators as terminal depots for their grain. In 1870 the State of Illinois found it necessary to control the handling of the elevators, owing to the fact that there had been some proceedings that were detrimental to the grain interests of the State, and at the constitutional convention of that year an article of the constitution, which was adopted in either 1870 or 1871, was devoted entirely to instructions to the legislature in regard to making laws concerning the inspection and storage of grain, which laws, it was stated in the article, should be construed liberally in the interest of producers and shippers.

"During the period from 1871 until 1887 there was very little if any difficulty in the manner in which the grain was handled in these elevators. The public used them entirely. They were recognized as the terminal freight depots for grain received from the various roads in Chicago, and were so treated. They were handled by disinterested parties engaged solely in the warehouse business, and the independent shippers and receivers of grain in Chicago and at outside points owned and controlled the grain that was stored in these houses. The rate of storage was fixed at the beginning of each year, as provided by law. It was a published rate and the same to all persons. Following the enactment of the interstate-commerce law, the elevators during the next three or four years passed out of the hands of the people who had devoted their entire time to the warehouse business, and passed into the hands of people who immediately embarked in the grain business in addition to doing a warehouse business. As this state of affairs progressed it gradually drove the public out of the public warehouses, so that they could not handle the grain in the houses in competition with the people who operated the houses for the railroads, as the storage charge which the public had to pay made it impossible for them to compete with the operator of the public warehouse, who, if he paid any storage at all, paid it to himself. The entire method of handling grain in the elevators changed between the years 1887 and 1892.

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"The proprietors of these public warehouses are the most extensive dealers in grain on the roads of which these houses are the terminal depots, and own, to a great extent, all the grain that is stored in these houses. The public can not successfully handle grain against them, as the charge for storage which the public has to pay bars them as competitors of the elevator people, who pay storage to themselves. The effect has been that grain coming to Chicago on any line of road where these conditions exist, grain whose inspected grade would of necessity oblige it to go to elevators, found but one buyer, the proprietor, as he alone would buy the grain that went into that house. It was in evidence in 1896, when the matter was tried before Judge Tuley, that the elevator proprietors at that time owned 75 per cent of all the grain in the elevators in Chicago.

"The great weight of the evidence is to the effect that the warehousemen of Chicago did not commence to so deal in grain to any general extent until about the year 1885; that the practice has grown so rapidly that now and for 2 or 3 years past they are the principal buyers and sellers on the Chicago market and upon the Chicago Board of Trade: that by reason of the advantages they possess and by reason of certain changes in the grain trade they have practically driven out of business the class of men who were before then engaged in buying and shipping grain on the Chicago market. And it is admitted that they have dealt in grain to the extent that they now own at least three-quarters of all the grain stored in the public warehouses of the city of Chicago, and it also appears by the evidence that they are fast monopolizing the business of dealing in grain in the Chicago market." (Industrial Commission: Agriculture, pp. 295, 297, 298.)

The economic forces that brought about the above relation between warehousing grain dealers and the transportation interests we shall now analyze.

Railroads about 1885 made regulations by which grain received at Chicago could be sold on the track, allowing 24 hours within which to inspect it, and 72 hours within which to remove it. The charge for demurrage hitherto made was then dropped, and the expensive practice of forcing grain to be put in warehouses upon arrival at Chicago was also thus discontinued. Track selling and selling by sample became quite general at the same time, as did through billing to New York from points of origin by way of Chicago without unloading. At the time (1885-1887) these economies, on the basis of the rate of three-fourths of a cent now charged for transferring grain, must have resulted in a reduction of a cent a bushel at least, if not 2 cents, in the expense of handling grain at Chicago. Furthermore, it reduced the time occupied in transfer from 3 weeks to 3 days, another economy of the utmost importance to the earning power of the rolling stock of railroads.[1]

At this time and under these methods the producer in territory tributary to Chicago as a terminal market could ship his grain to Chicago, billed through to a New York consignee, with the option of offering it for sale on track at Chicago. If sold there, he paid the local rate to Chicago; if not sold, he could reconsign it to another person and point of destination, say to Philadelphia or Boston, at the through rate. The difference in the two rates equaled 2 cents per 100 pounds.

These economies put the producer in a strong economic position as a marketer of his own grain; but they likewise had the effect of tending to eliminate the terminal warehouse interests and of diverting grain destined for the seaboard from Chicago as a primary market. St. Louis began to gain as a grain gateway to the East, and the Gulf movement of grain through Kansas City began shortly afterwards. Simultaneously the winter wheat and corn centers of production tended to shift toward the Southwest, thus increasing the length of the rail haul to Chicago and the East, and reducing the rail haul to the Gulf; likewise the northwesterly trend of the spring wheat belt, by shortening the rail haul to the upper Lake ports, threatened to shift the main movement of spring wheat from Chicago to Duluth as the chief gateway through which this part of the wheat surplus could be more economically distributed.

On each side of Chicago, north and south, therefore, two geographical tendencies were at work threatening her supremacy, at first simply as a grain-distributing focus. The interests involved in these tendencies were not simply those of the terminal interests at Chicago. The railroads, which were apparently at first losing nothing by the change from local for through billing of the grain traffic, began to realize that the later gains of the non-Chicago grain movements meant not only an enormous reduction in the annual volume of traffic, but what was still more important, it involved the entire commercial position of Chicago as the main center of inland distribution of commodities. The loss to Chicago of the east-bound grain traffic must inevitably result in the loss of west-bound traffic for distribution through Chicago.

Such was the situation up to the period 1887-1890, and somewhat later. Under this relation of producer and distributer the grain producer could in person put his grain upon the markets of the country without prejudice or fear of preventive interests. The producer had a position in the market of such economic freedom and scope as to make him an important factor in fixing prices. The liberal railway regulations enabled him to reach the best primary markets and the leading seaports without surrender of the property right in his own product. The competition of buyers unallied with railways gave the producer the open-world market. The two essential features in the distributive situation are always the dealers acting as transfer agents between producers and consumers, and the physical distributer—the transporter—discharging his legal function as a common carrier. These two economic interests, as long as they acted independently, could not control the grain movement to Chicago to the extent desired, especially from the trans-Missouri territory. If the roads centering in Chicago were prepared to give the grain interests there a rate which would get the grain away from newly competing roads in the constantly receding productive areas, the control of the movement might be secured to Chicago. At this game, however, those competing carriers could also play. But there was still another way, and this was the way taken. If a grain-carrying line centering in Chicago could ally itself with dealers in Chicago by leasing its local and its terminal elevators to buyers who could command capital enough to buy in the grain along its line of railway and thus secure the volume of grain traffic, such carrier could well afford to give such dealer or dealers acting together the use of its terminal facilities and even its country elevators on such terms as to make it worth their while working with them. A new consolidation of interests enforced by competition of markets occurred. This is substantially what happened in the passing of the public warehouse or terminal elevators into the control of private grain-dealing interests. It is not necessary to assume that these dealers get reduced rates; they pay for their privileged position in another way. There can be no doubt as to the fact that less than half a dozen grain-dealing firms find it to their interest to act virtually as freight-soliciting agents for the railroads in their effort to bring grain to Chicago. They constantly outbid independent buyers at country points of origin. The grain has to be gotten by dealers now in substantial control of the warehousing facilities to fill their warehouses, and the railroad employing these dealers as its virtual agents must make it to their advantage to command the volume of grain traffic within the reach of the road. It is immaterial in what form this advantage over less favored dealers comes. On no other terms except those of mutual advantage to railroad and dealer can competition among independent dealers be eliminated and the solidarity of interests between grain-buying warehousemen and a railroad be explained. The evidence is not lacking that possibly 40 per cent of the grain which a given dealer brought to Chicago under these arrangements would normally have gone elsewhere, under open and equitable competition among independent dealers. The reason it went to Chicago is because the warehousing interests paid more for it than the commission merchant could afford to pay there or elsewhere.

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[1] Industrial Commission: Agriculture, pp. 295-300.

The situation here must be kept clearly in mind when we come to ask and answer the question, what effect this relation of privileged elevator warehousemen with transporting agencies has upon the producing and the consuming interests of the country. Assuming that on any given line local and terminal elevators are in dealers' control in more ways than one, its effect upon the producer is to shut him out of free access to the world market. In the first place, where this relation between dealer and carrier exists, the local buyer has generally disappeared. That has eliminated one element of competition from the market for the producer's grain. In the second place, where this relation is in force and the country elevator is generally in control of the terminal warehousemen, it has succeeded in shutting out to a considerable extent, if not wholly, the rivalry of commission men, and thus eliminating another element of competition. Where farmers themselves have attempted to erect their own elevators the policy of the road has often been to prevent competition with the privileged buyers. In cases where farmers have presumed to ignore the local elevator and shoveled their grain from wagon into car, the grain dealers' union has issued boycotting notices against the commission houses handling this grain at the terminal market. Wherever the terminal elevators and the local elevators are in the control of the same grain-buying firm along a given line of railroad whose policy it is to protect such dealer, the position of the farmer seeking to market his surplus grain is economically such as to leave to him practically the narrowest range of choice as to the place or price at which he may market his grain. If he stores it extensively, it will be to the interest of the dealer to depress prices, thus ousting it from the local elevator in which the grain is in the producer's control and moving it to the terminal elevator, where the control is more completely in the hands of the elevator proprietor. This latter control appears to the disadvantage of the producer in the well-grounded complaints as to mixing, grading, weight, and inspection. The position of the producer is, it is true, temporarily improved by the competition of the commission merchant and the warehousing buyers at the country station. It is well known that the net price offered by the latter class of dealers for grain on track at the country elevator often exceeds the primary market price less freight. The country buyer and the commission merchant at primary markets under such conditions can not continue in commercial relations with one another or with producers. The only result upon the producer's position can be this: That the warehousing buyers are in a position to kill off their rivals. When that is done, the warehousemen will evidently, for the time being, be in control of the situation. Unless some other factor intervenes, the position toward which the producer is heading is that of selling to a monopoly. Is there any escape from this impending position? If so, what is it, and to what extent is it available?

12. EXPENSE OF MARKETING IN TERMINAL MARKETS.

The terminal charges on grain given in official publications are maximum charges. The ones concerned in transactions are at liberty to charge less, but charge the full rate if not obliged to shade the charges in one way or another. At the maximum rates given we can figure on the expenses of distribution.

What are the total expenses, including both commercial and carrier's charges, of bringing a car of grain from a shipping point in a representative grain section to one of the leading primary markets?

Take wheat, corn, and oats from Beatrice, Nebr., to Chicago, of which we have the railway rates in force from July to December 31, 1899. We assume that the country elevator charge on corn and oats is one-half that on wheat, but we include an inspection fee of 25 cents per carload, and the weighing charge of 30 cents per carload. Together, these fees of 55 cents on a 550-bushel carload, would be one-tenth of a cent per bushel.

Expenses per bushel of marketing Nebraska grain at Chicago.

Items of expense.	Wheat per bushel.	Corn per bushel.	Oats per bushel.
	Cents.	*Cents.*	*Cents.*
Country elevator charge	2.0	1.0	1.0
Railway rates, Beatrice to Chicago	11.7	12.3	12.3
Commission for sale on consignment	1.0	.5	.5
Transfer to storage in Chicago elevator	.75	.75	.75
Inspection and weighing	.01	.01	.01
Total per bushel	18.46	14.56	14.56

Analysis of these expenses into commercial and railway charges shows that this total is apportioned as follows:

	Wheat.	Corn.	Oats.
	Per cent.	*Per cent.*	*Per cent.*
Railway charges	79.6	85	85
Commercial charges	20.4	15	15

Producer's proportion of terminal value.—The Chicago market takes between four and five million bushels of wheat annually for milling consumption at that point; that is, about a seventh of the total yearly receipts of wheat are manufactured into flour.

For this wheat consumed at Chicago, we may estimate the proportion of the consumer's cost that went to distributive agencies and to producers. Let it be assumed that red-winter wheat No. 2 cost the Chicago miller 68 cents in December, 1899. On this basis the producer's share, as compared with the shares of the railroad and the grain trade, would be substantially apportioned as follows:

	Per bushel.	Per cent
	Cents.	
Consumer's cost	68.00	100.0
Distributer's expenses	18.46	27.2
Producer's share	49.54	72.8

Reference to the Department of Agriculture's estimate of farm prices on December 1, 1899, shows that the farm price for Nebraska wheat at that date was 49 cents, thus confirming the accuracy of the calculation made on the basis of the Chicago price to the consumer.

The result further indicates that the producer of wheat in Nebraska gets substantially three-fourths of what the consumer pays for it, and a little over one-quarter of its value goes to distributing expenses.

13. TERMINAL CHARGES ON GRAIN.

There are four principal charges on grain in terminal handling: Inspection, weighing, storage, and commissions. When the grain-dealing and warehousing firm uses its own private elevator for handling its own grain, the items of storage and commissions do not appear.

We give below the rates for each of these charges at Chicago and St. Louis:

CHICAGO.

		Cents.
1. Illinois State grain inspection rates:		
Inspection—		
From cars	per car	25
From wagons	per load	10
From canal boats	per M bushels	40
To vessels	do	50
To cars in bulk	per car	35
To teams	do	35
To teams	per load	10
In sacks	per bushel	0¼
By sample	per car	30
From warehouse	per M bushels	25
2. Weighing charges on grain:		
By cargo, from elevator to vessels	do	15
From canal boats	per boat load	100
In bulk, at regular transfer stations	per carload	30
3. (*a*) Commissions on consignment:		
Wheat, rye, and barley, by carload lots, in store, free on board cars or vessels, on track, delivered, or to be shipped from any other point	per bushel	1
Corn by carload lots, in store	do	0½
For selling corn otherwise than in store	do	0½
For selling boat loads of grain	do	0¼
For selling grain in store, afloat, or free on board vessels	do	0½
(*b*) Commission for purchase and shipment of grain:		
Rye and barley, to be shipped by vessel cargo	do	0½
Other grain, to be shipped by vessel cargo	do	0¼
All grain to be shipped by rail	do	0½

4. Storage: Three-fourths of 1 cent per bushel for the first ten days or part thereof; one-fourth of 1 cent for each additional ten days or part thereof, so long as it remains in good condition.

ST. LOUIS.

		Cents.
1. Inspection:		
On arrival at public elevators	per car	30
Out of public elevators	do	30
At places other than public elevators	do	50
Out of elevators to barges	per M bushels	45
2. Weighing:		
20 cents per car in and 20 cents per car or carload lots out of elevators.		
Out of barges	per M bushels	30
Sack grain in lots of 200 sacks or less	per lot	20
In lots of over 200 sacks, one-eighth of 1 cent per sack.		

3. Storage:

On wheat, corn, and rye, 1 cent per bushel for first 10 days or part thereof, and three-eighths of 1 cent per bushel for each additional 10 days or part thereof.

On oats, one-half of 1 cent per bushel for first 10 days or part thereof, and no charge for special bin, and three-eighths of 1 cent per bushel for each subsequent ten days.

4. Commission: 1 cent per bushel of wheat; one-half cent per bushel of corn and oats; 2 cents per bushel of barley.

14. EFFECT OF THE SYSTEM UPON PRIMARY MARKETS.

The economic effect of this system of grain handling upon the constitution of the primary market is significant. The effect appears first upon the grain dealer not in control of a terminal warehouse. To a very great extent the nature and character of the primary grain markets themselves have been changed by the tendency of the grain-dealing warehousemen to eliminate the independent commission merchant. It is self-evident that, as a rule, the commission merchant's interest lies in getting the highest possible price for grain consigned to him at the primary market. Is it any less evident that it may be to the interest of the grain-dealing warehouseman to get the lowest possible price for the grain that is put into his hands for storage? It is to his interest to prolong the storage period for that purpose. A primary market with a good representation of commission merchants is a competitive market for the producer, but a terminal market with the grain dealers acting in common and in control of the grading and the terminal facilities is apt to become a monopoly market, in effect if not so in appearance, by reason of this relation among dealers and elevators.

The consolidation of the primary market.—The conclusion of our analysis of the first main stage in cereal distribution from producer to primary markets is this: That competition among primary market dealers has resulted in a progressive degree of consolidation of distributive agencies and cooperation among leading dealers, especially in the older and larger markets, either (1) by economies in handling large volumes of grain or (2) by cut rates of transportation, or both.

The reorganization which has been going on within the primary market has resulted from the necessity of introducing economies to reduce expenses of distribution. Though this process is far from being complete, so far as it has gone the result appears to be in line with economic tendencies in other departments of commercial enterprise. It will therefore probably be permanent. The firms in control of the terminal elevators, it appears, do the greater volume of business in the primary market at a lower rate than others not in control of elevators are able to do it. Capital being free to acquire control of terminal elevators, any change in the primary market which reduces expenses of distribution can not be looked upon as anything other than a benefit to the consumer. The consolidation of agencies also appears at present to net the producer a higher price than formerly in spite of its tendency to put the market in the hands of a combination of buyers on a large scale, who may act together with mutual understanding as to the price to be paid to the producer.

In Chicago, where this development has gone farthest, consolidation of distributive agencies has advanced to a stage at which the commission merchant frequently finds it extra hazardous to act as consignee of the producer's shipments of grain in competition with dealers who control warehousing facilities in their own interest rather than as public agencies open to all dealers at an equal rate of charge. The advantage to warehousing dealers is as great as $10 per carload. In other primary markets no evidence exists to show that grain-handling agencies have gone quite so far as this in the direction of consolidation, but the tendency to eliminate independent dealers is general in other primary markets, as well as at country shipping points. Originally at Chicago one set of men received grain from country buyers; they were called receivers. This class in turn sold to another set known as shippers. This class forwarded to consumers or speculated on its own account. When the elevator proprietors (1887-1890) entered into the market the shippers were forced to become buyers. This gave rise to the threefold competition among buyers in the primary market, and of these three sets of buyers—commission merchants, speculative shippers, and elevator proprietors—the last only is in a position to take advantage of the economies of consolidation, by leasing or owning country and terminal elevators and handling grain on a large scale. It is evident that three commissions and profits have been reduced to one by this change—the commission paid to the local buyer, that to the commission merchant acting as receiver, and the profit, commission, or brokerage to the speculator or shipper.

Unless the methods of the line-elevator companies are commercially demoralizing and in violation of law, it would seem that they are entitled to succeed on the ground of the economies they have effected in the grain trade.

Competition among primary markets.—If the position of warehousemen in the organized primary market enables them to get lower rates from railroads than independent grain dealers or local shippers are able to get, neither the producer nor the consumer is injured thereby; on the other hand, these rates are likely to become permanent, because without them a primary market would presumably not be able to keep the grain traffic from going to other primary markets and the roads must lose the traffic. The lower rate to large buyers seems to be required by the railroads for self-protection. It is this competition among primary markets for the surplus grain that prevents the grain-handling interests from monopolizing control of the process of distribution between producer and consumer. The lack of adequate competition among different classes of dealers in the same primary market first resulted in prosperous times in an oversupply of dealers; next, a loss of grain to other primary markets resulted from a too loosely organized market; and lastly, the consolidation of agencies in such primary market to the extent of overcoming some of the natural advantages of competing primary markets. The competition of an excessive number and variety of dealers within the primary market impaired its capacity to command the volume of traffic; the only remedy was consolidation within the market, in order that it might successfully compete with other primary markets.

This in brief is the history of the development which has reduced the element of competition within the primary grain market only to intensify and enlarge the scale of competition among the few large concerns in these markets. So that it may be fairly doubted whether in the grain-gathering process from farm to primary market a single element of competitive importance has been lost by the change from the earlier to the later system. On the other hand, the indications are that what at first sight appears to be a monopolistic position, in the relation of the farmer to the railroads and the receivers of grain, is, after all, a field in which great primary markets and great railway systems are quietly yet keenly in daily and hourly competition for a share of the cereal trade.

15. ELEMENTS OF STRENGTH IN PRIMARY MARKETS.

The position of a primary market depends first on its transport relations between productive areas and consuming centers. But, with all that can be desired in this respect, a discriminating adjustment of railway rates may simply sever a market from its connection with the sources of supply and the centers of consumption, thus forcing traffic in another direction. An instance of this kind arises when, by some slight change in the relative rate on grain from the farm to two different primary markets, the tributary area of the market discriminated against is very much circumscribed. At Peoria, Ill., for instance, the grain receipts for 1899 were less by 2,138,000 bushels than in the previous year, whereas a decided increase was anticipated. The causes were discrimination in rates of freight for the first three months of the year, in that a favorable rate for export grain was denied Peoria and granted to our competitive outlets. An appeal to and hearing by the Interstate Commission rectified the injustice after a continuance for the period mentioned above.

During the last 6 months of 1899 this market was hampered by an unusual and continuous scarcity of cars to bring to and take from this market the usual liberal receipts from abundant harvests.

The figures given below, representing the receipts and shipments of grain and flour at Peoria, are presented to show the preponderance of the corn trade at this interior market. It will be noticed that the consumption of corn in distilling amounts to a very large proportion of the total corn receipts.

Flour and grain receipts and shipments at Peoria for the year 1899.

		Receipts.	Shipments.
Flour	barrels..	511,120	450,650
Wheat	bushels..	459,350	76,750
Corn	do....	17,061,200	5,558,700
Oats	do....	9,138,000	9,146,950
Rye	do....	133,900	19,200
Barley	do....	1,394,350	940,700
Total	do....	28,697,920	16,192,950

This local demand for corn for consumption must have a favorable effect upon the immediate market. Even though the supply is greatly in excess of the demand, Peoria still competes with Chicago over considerable territory.

Besides favorable transport relations between producing and consuming districts, a third element of strength in a primary market is its capacity for local consumption. Peoria furnishes a better corn market than Chicago for this reason, that the demand for local consumption must be met, while Chicago buyers may simply stay out of the market if prices rise too high for profitable trading. Likewise Minneapolis, on account of its consumption of wheat in its flour mills, makes that market a more advantageous one for producers than it otherwise would be.

Another factor in a primary market's position is its elevator capacity. Terminal markets must have facilities for taking charge of the visible supply of grain which accumulates after harvest. The carrying of this vast stock is mostly done by these central cities, whose shipping facilities enable them to dispense the surplus whenever demand may arise.

Every terminal market knows that its success depends on having the warehousing capacity required to store the largest possible quantity of grain it can command under most favorable crop conditions. The market that is ready to handle such quantity of grain at the lowest expense is in the long run destined to succeed in sustaining itself among its rivals, other things being equal.

The capacity of single elevators at these terminal points of concentration sometimes reaches the high figure of 4,000,000 bushels.

The public warehousing capacity at Chicago is 28,600,000 bushels, and the private warehouse capacity, 28,645,000 bushels. Other markets have less capacity, but are as a rule increasing their capacity with the development of trade. For example, Duluth, Kansas City, and the primary markets on the upper Pacific coast have largely increased their capacity, owing to increased grain movements through those centers. The failure of Galveston to provide adequate warehousing capacity turned wheat away in the direction of the Chicago markets and eastward by rail during the early weeks of harvest in the summer of 1900.

III.—EXPENSES OF MARKETING IN THE PRINCIPAL MARKETS.

1. ST. LOUIS AS A PRIMARY GRAIN MARKET.[1]

The first step in arriving at an understanding of the distribution system is to become familiar with the facts of the principal markets.

St. Louis, on January 1, 1900, had a public elevator capacity of 8,700,000 bushels of grain and a private elevator capacity of 2,573,000 bushels, making a total capacity of 11,273,000 bushels.

The amounts of grain handled at St. Louis during the past five years compare as follows:

RECEIPTS.

	1899.	1898.	1897.	1896.	1895.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*
Wheat	10,428,163	14,240,252	12,057,755	12,651,248	11,275,885
Corn	23,344,475	26,733,962	31,077,440	24,763,445	8,779,290
Oats	12,606,835	10,725,380	12,147,225	11,491,310	10,466,160
Rye	454,790	571,707	712,428	296,930	224,821
Barley	1,409,474	2,001,911	1,605,811	1,931,611	2,104,126
Total	48,243,737	54,273,212	57,600,659	51,134,544	32,850,282

As a concentrating point St. Louis ranks fourth, following Chicago, Minneapolis, and Duluth-Superior. Of the 10,428,163 bushels of wheat received here in 1899, about 1,000,000 bushels of the hard wheat was exported direct to Europe and the balance converted into flour in the local and near-by mills. The consumption of wheat in the St. Louis mills averages annually over 5,000,000 bushels. In her corn trade St. Louis ranks next to Chicago in receipts. Through her market passes much of the oats destined for Southern consumption. Rye is unimportant, but nearly 1,500,000 bushels of barley are consumed yearly in her local breweries. The Merchants' Exchange of St. Louis is one of the few commercial organizations which keep account of the source of supply of their cereal receipts and of the direction of shipments in distribution. The entire geography of her cereal distribution is thus presented in outline year by year—a practice which deserves the commendation of all interested in definite information on the commercial movements to and from our great markets.

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[1] Figures are from Report of Trade and Commerce of St. Louis, 1899.

(1) GEOGRAPHICAL MOVEMENT OF GRAIN.

The following tables show the sources of supply of the St. Louis market and the direction of shipments from it:

Sources of wheat supply for three years.

From—	1897.	1898.	1899.
	Bushels.	*Bushels.*	*Bushels.*
The West, by rail and Missouri River	6,122,799	7,019,891	4,417,978
The South, by rail from west of Mississippi River	1,025,076	828,218	942,953
The South, by Mississippi River boats	306,316	751,658	777,616
The South, by rail from east of Mississippi River	646,851	1,076,144	1,007,845
The East, by rail and by Illinois River	1,122,200	906,492	971,515
The North and Northwest, by rail and river	2,524,431	3,302,549	1,872,551
Wagons, from near the city	310,062	355,000	407,672
Total receipts	12,057,735	11,240,252	10,428,163

Direction of shipments of wheat for three years.

Shipped to—	1897.	1898.	1899.
	Bushels.	*Bushels.*	*Bushels.*
Europe, direct via Atlantic seaboard	1,652,592	5,235,907	772,100
Europe, direct via New Orleans	1,815,623	2,862,042	234,720
East and South, by rail (not exported)	3,855,419	2,847,378	3,793,386
To local points, by rail and river	136,449	81,438	108,221
Total shipments	7,460,083	11,026,765	1,908,427

Sources of corn supply for three years.

From—	1897.	1898.	1899.
	Bushels.	*Bushels.*	*Bushels.*
The West, by rail and Missouri River	11,383,145	12,815,640	9,092,570
The South, by rail from west of Mississippi River	207,270	501,450	340,905
The South, by Mississippi River boats	14,565	52,055	29,290
The South, by rail from east of Mississippi River	7,800	32,250	73,550
The East, by rail and by Illinois River	1,672,655	1,465,400	1,000,055
The North and Northwest, by rail and river	17,391,705	11,467,170	12,508,105
Wagons, from near the city	400,000	400,000	100,000
Total receipts	31,077,440	26,733,965	23,441,475

Direction of shipments of corn for three years.

Shipped to—	1897.	1898.	1899.
	Bushels.	*Bushels.*	*Bushels.*
Europe, direct via Atlantic seaboard	10,967,068	11,622,592	10,536,998
Europe, direct via river to New Orleans	3,827,963	3,006,488	1,748,517
South and East, by rail (not for export)	10,627,522	12,985,508	7,852,580
Southern points, by river	351,150	211,199	52,818
Local points	43,928	43,304	51,010
Total shipments	25,817,631	27,869,091	20,241,923

Sources of oats supply for three years.

From—	1897.	1898.	1899.
	Bushels.	*Bushels.*	*Bushels.*
The West, by rail	3,220,240	1,966,850	2,062,620
The South, by rail from west of Mississippi River	31,785	100,070	57,880
The South, by Mississippi River boats	680	1,970	195
The South, by rail from east of Mississippi River:	459,865	381,860	876,850
The East, by rail and Illinois River	1,221,080	1,105,225	1,628,850
The North and Northwest, by rail and river	6,913,575	6,869,405	7,680,440
Wagons, near the city	300,000	300,000	300,000
Total receipts	12,147,225	10,725,380	12,606,835

Direction of shipments of oats for three years.

Shipped to—	1897.	1898.	1899.
	Bushels.	*Bushels.*	*Bushels.*
The West	121,820	83,865	92,136
The South, by rail	3,948,626	4,687,359	5,321,029
The South, by river	1,169,994	1,093,650	629,653
The East, by rail	118,955	109,835	139,172
Local points	1,235	655	2,595
Total shipments	5,360,630	5,975,361	6,184,585

In 1897, 416,350 bushels were exported via Atlantic ports and 631,429 bushels via New Orleans.
In 1898, 4,521 bushels were exported via Atlantic ports and 861,717 bushels via New Orleans.
In 1899, 42,949 bushels were exported via Atlantic ports and 110,699 bushels via New Orleans.

Sources of rye supply for three years.

From—	1897.	1898.	1899.
	Bushels.	*Bushels.*	*Bushels.*
The West, by rail	93,741	165,139	108,132
The South, by rail from west of Mississippi River	2,100	3,515	15,730
The South, by Mississippi River boats	45	227	236
The South, by rail from east of Mississippi River	2,100	....	1,100
The East, by rail and Illinois River	11,112	9,647	7,065
The North, by rail and river	403,330	393,149	321,927
Total receipts	512,428	571,707	454,790

Sources of barley supply for three years. (*a*)

From—	1897.	1898.	1899.
	Bushels.	*Bushels.*	*Bushels.*
The West, by rail	89,343	95,250	28,500
The South, by rail from west of Mississippi River	2,250	5,250	6,939
The South, by Mississippi River boats	273	35	35
The East, by rail and Illinois River	707,500	1,079,376	288,750
The North, by rail and river	806,445	822,000	1,085,250
Total receipts	1,605,811	2,001,911	1,409,474

a At St. Louis American barley competes with Canadian barley. No Canadian barley was received in 1896; 13,000 bushels were received in 1897, none in 1898, and 20,099 bushels in 1899.

St. Louis being a leading consuming center as well as distributing center, a most complete inquiry was made into the question of the proportion of the value of cereals that goes to producers and distributers, respectively. The results of this inquiry are presented in statistical form herewith.[1]

In the selection of a price in each case that would be a fair criterion of the grain movement, the plan was followed of taking a figure from actual record of cash prices in months when a large proportion of the crop passed out of the producer's hands. The prices which the consumer paid are the prices which standard grades of cereals brought on sale at that market. From this figure as a basis the usual distributing charges are deducted, and thus the net price received by the producer arrived at, on the assumption that the producer was the shipper of his own grain. When his grain passed through a country elevator a deduction of 2 cents would have to be made from the price credited to the producer, were it not for the fact that this expense may be fairly regarded as one of the items in the cost of preparation for market; on this account the country elevator expense is not charged to distributive expenses, but to the cost of production.

Thirty-six different shipping points at varying distances from St. Louis are represented in these results. The distances ranged from 81 to 590 miles from St. Louis, and both competitive and noncompetitive points are selected, in order to show whether or not the lack of competition really increases the distributer's share and reduces the producer's share of the value of his product in market.

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[1] The credit for the statistical results is due to Mr. E. S. Tompkins, of the St. Louis Traffic Bureau, acting as a special agent for the Industrial Commission.

The expenses of distribution are twofold: Commission for selling the consig ment at St. Louis, and the freight rate per bushel from point of origin to primar market. All of these are given at the rate in force per bushel. Altogether th exhibit of the relation of distributive expenses to prices paid the producer con prises a collection of much value to the careful observer of the commercial stat of agriculture.

(2) ITEMIZED EXPENSES OF DISTRIBUTION AT ST. LOUIS.

The following table shows the expenses of distribution:

ITEMIZED EXPENSES OF MARKETING WHEAT AT ST. LOUIS.

Year and month of sale.	Kind and grade of product.	Consumer paid per bushel.	Producer received per bushel.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Per cent age of consumer's price to producers.	Remarks.
1899.		*Cents.*	*Cents.*				
November	Wheat, No. 2, red, winter.	69	60.2	1 cent per bushel commission for selling; 7.8 cents per bushel freight from Woodburn, Iowa. Total, 8.8 cents per bushel.	13	87	Noncompetitiv point, 368 mil from St. Louis.
Do	do	69	62	1 cent per bushel commission for selling; 6 cents per bushel freight from Tipton, Mo. Total, 7 cents per bushel.	10	90	Noncompetitiv point, 163 mil from St. Louis.
Do	do	69	56	1 cent per bushel commission for selling; 12 cents per bushel freight from Crete, Nebr. Total, 13 cents per bushel.	19	81	Competitive poin 486 miles from S Louis.
Do	do	69	55.5	1 cent per bushel commission for selling; 12.6 cents per bushel freight from Hutchison, Kans. Total, 13.6 cents per bushel.	20	80	Competitive point 590 miles from S Louis.
Do	do	69	60.2	1 cent per bushel commission for selling; 7.8 cents per bushel freight from Bloomfield, Iowa. Total, 8.8 cents per bushel.	13	87	Competitive point 258 miles from St Louis.
Do	do	69	58.4	1 cent per bushel commission for selling; 9.6 cents per bushel freight from Indianola, Iowa. Total, 10.6 cents per bushel.	15	85	Competitive point 385 miles from St Louis.

ITEMIZED EXPENSES OF MARKETING CORN AT ST. LOUIS.

1900.		*Cents.*	*Cents.*				
April	Corn, No. 2, mixed.	39	27.3	One-half cent per bushel commission for selling; 11.2 cents per bushel freight from Hastings, Nebr. Total, 11.7 cents per bushel.	30	70	Competitive point 580 miles from St Louis.
Do	do	39	27.72	One-half cent per bushel commission for selling; 10.78 cents per bushel freight from McPherson, Kans. Total, 11.28 cents per bushel.	29	71	Competitive point 515 miles from St Louis.
Do	do	39	31.78	One-half cent per bushel commission for selling; 6.72 cents per bushel freight from Shenandoah, Iowa. Total, 7.22 cents per bushel.	19	81	Competitive point 482 miles from St Louis.

ITEMIZED EXPENSES OF MARKETING CORN AT ST. LOUIS—Continued.

Year and month of sale.	Kind and grade of product.	Consumer paid per bushel.	Producer received per bushel.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Per cent age of consumer's price to producers.	Remarks.
1900.		*Cents.*	*Cents.*				
April	Corn, No. 2, mixed.	39	32.9	One-half cent per bushel commission for selling; 5.6 cents per bushel freight from Carrollton, Mo. Total, 6.1 cents per bushel.	16	84	Competitive point, 268 miles from St. Louis.
Do.	do	39	31.58	One-half cent per bushel commission for selling; 3.92 cents per bushel freight from Taylorville, Ill. Total, 4.42 cents per bushel.	12	88	Competitive point, 84 miles from St. Louis.
Do.	do	39	33.46	One-half cent per bushel commission for selling; 5.04 cents per bushel freight from Mexico, Mo. Total, 5.54 cents per bushel.	14	86	Competitive point, 110 miles from St. Louis.
Do.	do	39	27.3	One half cent per bushel commission for selling; 11.2 cents per bushel freight from Prosser, Nebr. Total, 11.7 cents per bushel.	30	70	Noncompetitive point, 595 miles from St. Louis.
Do.	do	39	27.72	One-half cent per bushel commission for selling; 10.78 cents per bushel freight from Burr Oak, Kans. Total, 11.28 cents per bushel.	29	71	Noncompetitive point, 530 miles from St. Louis.
Do.	do	39	31.78	One-half cent per busael commission for selling; 6.72 cents per bushel freight from Oakley, Iowa. Total, 7.22 cents per bushel.	19	81	Noncompetitive point, 359 miles from St. Louis.
Do.	do	39	32.9	One-half cent per bushel commission for selling; 5.6 cents per bushel freight from Browning, Mo. Total, 6.1 cents per bushel.	16	84	Noncompetitive point, 249 miles from St. Louis.

ITEMIZED EXPENSES OF MARKETING OATS AT ST. LOUIS.

1899.		*Cents.*	*Cents.*				
May	Oats, No. 2, mixed.	28	24.62	One-half cent per bushel commission for selling; 2.88 cents per bushel freight from Macon, Mo. Total, 3.38 cents per bushel.	12	88	Competitive point, 171 miles from St. Louis.
Do.	do	28	24.3	One-half cent per bushel commission for selling; 3.2 cents per bushel freight from Laclede, Mo. Total, 3.7 cents per bushel.	13	87	Competitive point, 229 miles from St Louis.
Do.	do	28	22.38	One-half cent per bushel commission for selling, 5.12 cents per bushel freight from Geneva, Iowa. Total, 5.62 cents per bushel.	20	80	Noncompetitive point, 406 miles from St. Louis.
Do.	do	28	23.66	One-half cent per bushel commision for selling; 3.84 cents per bushel freight from Wright, Iowa. Total, 4.34 cents per bushel.	16	84	Noncompetitive point, 305 miles from St. Louis.

ITEMIZED EXPENSES OF MARKETING OATS AT ST. LOUIS—Continued.

Year and month of sale.	Kind and grade of product.	Consumer paid per bushel.	Producer received per bushel.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.	Remarks.
1899.		*Cents.*	*Cents.*				
May	Oats, No. 2, mixed.	28	22.38	One-half cent per bushel commission for selling; 5.12 cents per bushel freight from Mason City, Iowa. Total, 5.62 cents per bushel.	20	80	Competitive point, 111 miles from St. Louis.
Do....	.....do	28	23.66	One-half cent per bushel commission for selling; 3.81 cents per bushel freight from Hedrick, Iowa. Total, 4.31 cents per bushel.	16	84	Competitive point, 316 miles from St. Louis.
Do....	.....do	28	23.02	One-half cent per bushel commission for selling; 4.48 cents per bushel freight from Hickman, Nebr. Total, 4.98 cents per bushel.	18	82	Competitive point, 165 miles from St. Louis.
Do....	.....do	28	21.42	One-half cent per bushel commission for selling; 6.08 cents per bushel freight from Lawrence, Nebr. Total, 6.58 cents per bushel.	23	77	Competitive point, 556 miles from St. Louis.
Do....	.....do	28	23.02	One half cent per bushel commission for selling; 4.48 cents per bushel freight from Walton, Nebr. Total, 4.98 cents per bushel.	18	82	Noncompetitive point, 185 miles from St. Louis.
Do....	.....do	28	24.62	One-half cent per bushel commission for selling; 2.88 cents per bushel freight from Shelbina, Mo. Total, 3.38 cents per bushel.	12	88	Noncompetitive point, 167 miles from St. Louis.

ITEMIZED EXPENSES OF MARKETING BARLEY AT ST. LOUIS.

1899.		*Cents.*	*Cents.*				
October....	Barley (good malting).	42	34.24	2 cents per bushel commission for selling; 5.76 cents per bushel freight from Fremont, Iowa. Total, 7.76 cents per bushel.	18	82	Competitive point.
Do....	.....do	42	29.92	2 cents per bushel commission for selling; 10.08 cents per bushel freight from Bushnell, S. Dak. Total, 12.08 cents per bushel.	29	71	Noncompetitive point.
Do....	.....do	42	31.84	2 cents per bushel commission for selling; 8.16 cents per bushel freight from Carroll, Iowa. Total, 10.16 cents per bushel.	24	76	Do.
Do....	.....do	42	28.96	2 cents per bushel commission for selling; 11.04 cents per bushel freight from Tyler, Minn. Total, 13.04 cents per bushel.	31	69	Do.
Do....	.....do	42	31.84	2 cents per bushel commission for selling; 8.16 cents per bushel freight from Arion, Iowa. Total, 10.16 cents per bushel.	24	76	Competitive point.

ITEMIZED EXPENSES OF MARKETING BARLEY AT ST. LOUIS—Continued.

Year and month of sale.	Kind and grade of product.	Consumer paid per bushel.	Producer received per bushel.	Combined expenses of distribution between producer and consumer.	Per centage of consumer's price to distributers.	Per centage of consumer's price to producers.	Remarks.
1899.		*Cents.*	*Cents.*				
October ...	Barley (good malting.)	42	28.96	2 cents per bushel commission for selling; 11.04 cents per bushel freight from Marshall, Minn. Total 13.04 cents per bushel.	31	69	Competitive point.
Do..........	.....do.......	42	32.8	2 cents per bushel commission for selling; 7.2 cents per bushel freight from Melbourne, Iowa. Total, 9.2 cents per bushel.	22	78	Do.
Do.....	.....do.......	42	30.88	2 cents per bushel commission for selling; 9.12 cents per bushel freight from Hardwick, Minn. Total, 11.12 cents per bushel.	26	71	Noncompetitive point.
Do.....	.....do.......	42	34.24	2 cents per bushel commission for selling; 5.76 cents per bushel freight from Ollie, Iowa. Total, 7.76 cents per bushel.	18	82	Do.
Do.....	.....do.......	42	32.8	2 cents per bushel commission for selling; 7.2 cents per bushel freight from Huxley, Iowa. Total, 9.2 cents per bushel.	22	78	Do.

2. KANSAS CITY AS A DISTRIBUTIVE CENTER.

Kansas City stands in the midst of a rapidly developing agricultural section. It is a central gateway for the entire trans-Missouri territory. The grain and live-stock movements give it its chief importance. But its live stock and agriculture are not the only interest of this section. Its lumber and mineral resources are large and valuable. The completion of the Kansas City, Pittsburg and Gulf Railroad through southern Missouri, Arkansas, Indian Territory, Louisiana, and Texas, a distance of 788 miles, has opened up to Kansas City a large and valuable trade territory. The lumber interest along this line is worth many millions per annum, and a large trade in early vegetables and fruits has been worked up over this road between Kansas City and the South.

Located midway between the head of the Lakes on the north and the shores of the Gulf on the south, its position as a distributing center is one of great commercial strength in the movement of farm products, from the centers of live stock and canal production to other national trade centers and to the seaboard for export by way of the Gulf.

(1) PRODUCTIVE AREA, RECEIPTS, AND CONSUMPTION.

The grain yield within territory commercially tributary to Kansas City may be roughly shown in both quantity and in value from the following tables:

WHEAT.[1]

The wheat crop in Kansas City's trade territory for a series of years.

	1896.	1897.	1898.	1899.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*
Kansas	30,794,000	47,998,152	61,939,412	35,522,000
Missouri	19,391,000	14,104,454	14,101,451	12,571,000
Nebraska	19,391,000	27,452,647	31,679,309	16,220,000
Iowa	11,473,000	13,153,114	22,189,624	8,430,000
Colorado	2,797,000	5,117,511	6,729,565	5,295,000
Texas	4,529,000	7,028,251	9,348,461	8,026,000
Arkansas	1,261,000	1,783,120	2,335,036	1,416,000
Indian Territory			5,250,000	4,250,000
Oklahoma	2,602,000	10,389,512	14,176,799	11,611,000
Total	92,238,000	127,026,824	173,752,663	103,374,000
Valuation	$46,119,000	$95,270,118	$86,876,331	$51,687,000
Total valuation for four years				$279,952,149

These valuations are based upon a farm price of 50 cents per bushel in 1896, 75 cents in 1897, and 50 cents in 1898 and 1899.

CORN.

The corn crop in Kansas City's trade territory for a series of years.

	1896.	1897.	1898.	1899.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*
Kansas	217,734,000	162,412,728	132,842,048	264,828,900
Missouri	176,769,000	171,923,882	154,731,486	153,250,000
Nebraska	298,600,000	241,268,490	158,754,666	222,180,000
Iowa	321,719,000	220,089,149	254,999,850	230,361,000
Colorado	2,853,000	3,353,975	3,113,892	3,078,000
Texas	32,229,000	72,175,142	105,336,700	91,188,000
Arkansas	29,721,000	35,580,560	15,365,220	53,236,000
Indian Territory			22,500,000	33,600,000
Oklahoma			23,250,000	43,719,000
Total	1,109,628,000	906,833,926	910,893,862	1,099,270,000
Valuation	$166,444,200	$125,525,088	$182,178,732	$219,854,000
Total valuation for four years				$694,002,020

These values are based upon a farm valuation of 15 cents in 1896 and 1897, and 20 cents in 1898 and 1899.

OATS.

The oat crop in Kansas City's trade territory for a series of years.

	1896.	1897.	1898.	1899.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*
Kansas	23,809,000	38,680,080	26,689,248	45,306,000
Missouri	15,866,000	22,078,166	19,851,000	20,625,000
Nebraska	31,093,000	51,731,095	56,215,012	58,119,000
Iowa	105,612,000	103,721,100	123,128,126	123,072,000
Colorado	2,601,000	2,968,540	3,063,191	2,957,000
Texas	12,669,000	16,311,150	21,121,630	16,409,000
Arkansas	5,075,000	5,284,824	7,229,629	6,715,000
Indian Territory				646,920
Oklahoma				4,500,000
Total	199,755,000	240,774,955	257,627,836	278,349,920
Valuation	$23,970,600	$28,892,987	$38,915,675	$54,869,984
Total valuation for four years				146,649,246

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[1] Figures are from Kansas City Trade Statistics, prepared by Mr. Cuthbert Powell.

These valuations are based upon a farm price of 12 cents per bushel in 1896 and 1897, and 15 cents in 1898, and 20 cents in 1899.

Nearly 5,000,000 bushels of wheat are ground annually at this trade center. Kansas City thus ranks with St. Louis as a milling center.

There are now 6 flour mills here, with a grinding capacity of 9,000 barrels per day, calling for the consumption of 42,750 bushels of wheat daily. Two of these mills are among the largest in the West, and they are all fitted up with the latest and most improved machinery, and the past year no less than $65,000 was spent by the smaller mills in enlargements and betterments, not only increasing their output, but giving work to more hands. There are six cornmeal mills here, with a grinding capacity of 2,500 barrels of meal per day, furnishing a daily market for 8,000 bushels of white corn; and 5,000 bushels of oats are ground into oatmeal each day.

Of these vast crops Kansas City handles a large per cent, either in the shape of grain or live stock fattened by them, and enjoys her share of the great money value arising from them.

Comparative receipts of wheat at Kansas City for twenty-one years, showing the upbuilding of the trade during that time compared with receipts at Chicago and St. Louis.

Year.	Chicago.	St. Louis.	Kansas City.	Year.	Chicago.	St. Louis.	Kansas City.
	Bushels.	*Bushels.*	*Bushels.*		*Bushels.*	*Bushels.*	*Bushels.*
1878	29,713,577	11,325,431	9,014,291	1889	18,762,646	13,810,591	4,550,000
1879	34,106,109	17,093,362	6,417,952	1890	14,248,770	11,730,774	5,797,400
1880	23,541,007	21,022,275	4,203,528	1891	42,911,258	25,523,183	16,396,491
1881	14,824,990	13,243,571	4,102,649	1892	50,234,556	27,483,855	31,161,000
1882	23,008,596	20,774,987	9,279,067	1893	35,355,401	14,642,999	17,170,360
1883	20,364,155	15,500,704	9,023,472	1894	25,665,902	10,063,242	9,518,400
1884	26,397,587	16,368,809	10,069,231	1895	20,637,642	11,275,885	8,230,800
1885	18,900,717	10,690,677	4,844,025	1896	19,933,402	12,631,248	6,978,600
1886	16,771,743	12,309,364	2,885,632	1897	28,087,147	12,057,735	26,121,600
1887	21,848,251	14,510,315	1,932,868	1898	35,731,556	14,240,252	28,731,300
1888	13,438,069	13,010,108	1,750,308				

(2) RELATION OF PRICES TO EXPENSES OF DISTRIBUTION.

The Kansas City grain trade is more generally conducted on a commission basis than is that of Chicago, where terminal elevator companies are the ruling element. The cost of marketing the three principal cereals includes the three items of commission, inspection and weighing, and the railway rate. The producer's net price is calculated on the basis of the primary market price representing the price level for the month of November, 1899, as that was the month in which the crop was most generally marketed.

The standard used is hard wheat instead of the soft red variety. The cultivation of red wheat in this section has been practically discontinued. Not 10 per cent of the crop last year west of the Missouri River was of the red variety. It is less hardy than the hard wheat and not liked so well as the hard wheat for export. The two grades, No. 2 and No. 3, practically cover three-fourths of the crop. In oats, mixed and white are given, as mixed alone would not represent over 50 per cent of the crop. These figures, however, represent much less than the farmer actually gets out of his grain, as his corn and oats are largely fed and are worth much more to him for feeding purposes than for sale upon the market. But when corn and oats were sold, the proportion which went to the producer is accurately represented in these figures.

ITEMIZED EXPENSES OF MARKETING WHEAT AT KANSAS CITY.[1]

Year and month of sale.	Kind and grade of product.	Consumer paid (per bushel).	Producer received per bushel.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.	Remarks.
1899.		*Cents.*	*Cents.*		*Per cent.*	*Per cent.*	
November.	No. 2, hard No. 3, hard	62⅞ to 64¾; average, 63¾ 55⅞ to 61¾; average, 58¾	54.82 49.82	Commission, 1 cent per bushel; inspection and weighing, ⅛ cent per bushel; freight, 7.8 cents per bushel from McPherson, Kans.; total, 8.92½ cents per bushel.	14 15	86 85	Competing point 217 miles from Kansas City.
Do.	No. 2, hard No. 3, hard	62⅞ to 64¾; average, 63¾ 55⅞ to 61¾; average, 58¾	49.42½ 44.42½	Commission, 1 cent per bushel; inspection and weighing, ⅛ cent per bushel; freight, 13.20 cents per bushel from Oklahoma City, Okla.; total, 14.32½ cents per bushel.	22.47 24.38	77.53 75.62	Competing point 400 miles from Kansas City.
Do.	No. 2, hard No. 3, hard	62⅞ to 64¾; average, 63¾ 55⅞ to 61¾; average, 58¾	55.42½ 50.42½	Commission, 1 cent per bushel; inspection and weighing, ⅛ cent per bushel; freight, 7.20 cents per bushel from Wellington, Kans.; total, 8.32½ cents per bushel.	13.05 14.17	86.95 85.83	Competing point 273 miles from Kansas City.
Do.	No. 2, hard No. 3, hard	62⅞ to 64¾; average, 63¾ 55⅞ to 61¾; average, 58¾	57.81½ 43.82½	Commission, 1 cent per bushel; inspection and weighing, ⅛ cent per bushel; freight, 4.8 cents per bushel from Falls City, Nebr.; total, 5.92½ cents per bushel.	9.29 10.08	90.71 89.92	Competing point 101 miles from Kansas City.
Do.	No. 2, hard	62⅞ to 64¾; average, 63.81	53.16	Commission, 1 cent per bushel; inspection and weighing, 1¼ cents per bushel; freight from Bennington, Kans., 8.40 cents per bushel; total, 10.65 cents per bushel.	16.7	83.3	Noncompetitive point 187 miles from Kansas City.
Do.	Wheat	62⅞ to 64¾; average, 63.81	51.36	Commission, 1 cent per bushel; inspection and weighing, 1¼ cents per bushel; freight from Blue Hill, Nebr., 10.30 cents per bushel; total, 12.45 cents per bushel.	19.5	80.5	Noncompetitive point 301 miles from Kansas City.
Do.	Wheat	62⅞ to 64¾; average, 63.81	51.66	Commission, 1 cent per bushel; inspection and weighing, 1¼ cents per bushel; freight from Perry, Okla., 9.90 cents per bushel; total, 12.15 cents per bushel.	19	81	Noncompetitive point 338 miles from Kansas City.

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[1] Reported by Mr. Cuthbert Powell, special agent, Kansas City, Mo.

ITEMIZED EXPENSES OF MARKETING CORN AT KANSAS CITY.

1899. November.	No. 2, mixed	28⅛ to 28⅝; average, 28⅜	21.69	Commission, ½ cent per bushel; inspection and weighing, ⅛ cent per bushel; freight, 6.44 cents per bushel from Concordia, Kans.; total, 7.06½ cents per bushel.	21.57	75.43	Competing point 155 miles from Kansas City.
Do	do	28⅜ to 28⅝; average, 28½	21.41	Commission, ½ cent per bushel; inspection and weighing, ⅛ cent per bushel; freight, 6.72 cents per bushel from Harper, Kans.; total, 7.34 cents per bushel.	25.54	74.46	Competing point 235 miles from Kansas City.
Do	do	28⅜ to 28⅝; average, 28½	22.81	Commission, ½ cent per bushel; inspection and weighing, ⅛ cent per bushel; freight, 5.32 cents per bushel from Beatrice, Nebr.; total, 5.94½ cents per bushel.	20.67	79.33	Competing point 195 miles from Kansas City.
Do	do	28⅜ to 28⅝; average, 28½	21.69	Commission, ½ cent per bushel; inspection and weighing, ⅛ cent per bushel; freight, 6.44 cents per bushel from Pond Creek, Okla.; total, 7.06½ cents per bushel.	24.92	75.08	Competing point 322 miles from Kansas City.
Do	do	28⅜ to 28⅝; average, 28½	22.82	Commission, ½ cent per bushel; inspection and weighing, 0.11 cent per bushel; freight from Washington, Kans., 5.32 cents per bushel; total, 5.93 cents per bushel.	20.6	79.4	Noncompetitive point 169 miles from Kansas City.
Do	do	28⅜ to 28⅝; average, 28½	21.42	Commission, ½ cent per bushel; inspection and weighing, 0.11 cent per bushel; freight from Ohiowa, Nebr., 6.72 cents per bushel; total, 7.33 cents per bushel.	25.5	74.5	Noncompetitive point 244 miles from Kansas City.

ITEMIZED EXPENSES OF MARKETING OATS AT KANSAS CITY, MO.

1899. November.	No. 2, mixed No. 2, white	23¾ 25 to 26; average, 25½	19.62 21.87	Commission, ½ cent per bushel; inspection and weighing, 0.09 cent per bushel; freight from Palmer, Kans., 3.04 cents per bushel; total, 3.63 cents per bushel.	15.6 14.2	84.4 85.8	Noncompetitive point 174 miles from Kansas City.
Do	No. 2, mixed No. 2, white	23¾ 25 to 26; average, 25½	18.34 20.59	Commission, ½ cent per bushel; inspection and weighing, 0.09 cent per bushel; freight from Deweese, Nebr., 4.32 cents per bushel; total, 4.91 cents per bushel.	21.1 19.2	78.9 80.8	Noncompetitive point 281 miles from Kansas City.
Do	No. 2, mixed No. 2, white	23¾ 25 to 26; average, 25½	20.07 22.32	Commission, ½ cent per bushel; inspection and weighing, ⅛ cent; freight, 2.56 cents per bushel from Parsons, Kans.; total, 3.18½ cents per bushel.	13.69 12.49	86.31 87.51	Competing point 155 miles from Kansas City.

ITEMIZED EXPENSES OF MARKETING OATS AT KANSAS CITY, MO.—Continued.

Year and month of sale.	Kind and grade of product.	Consumer paid per bushel.	Producer received per bushel.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.	Remarks.
1899.		*Cents.*	*Cents.*		*Per cent.*	*Per cent.*	
November.	No. 2, mixed	23½	19.79	Commission, ½ cent per bushel; inspection and weighing, ⅛ cent per bushel; freight, 3.04 cents per bushel from Marysville, Kans.; total, 3.66¼ cents per bushel.	15.76	84.24	Competing point 174 miles from Kansas City.
	No. 2, white	25 to 26, average, 25½	21.84		14.37	85.62	
Do	No. 2, mixed	23½	19.79	Commission, ½ cent per bushel; inspection and weighing, ⅛ cent per bushel; freight, 3.04 cents per bushel from DeWitt, Nebr.; total, 3.66¼ cents per bushel.	15.76	84.24	Competing point 185 miles from Kansas City.
	No. 2, white	25 to 26, average, 25½	21.84		14.37	85.63	
Do	No. 2, white	23¼	16.23	Commission, ½ cent per bushel; inspection and weighing, ⅛ cent per bushel; freight, 6.4 cents per bushel from Noble, Okla., total, 7.02½ cents per bushel.	30.21	69.79	Competing point 424 miles from Kansas City.
	No. 2, mixed	25 to 26; average, 25½	18.48		27.54	72.46	

Inspection and weighing on oats is nine one-hundredths of a cent and on corn eleven one-hundredths cent per bushel.

3. GRAIN RATES TO MINNEAPOLIS (DULUTH) 1887-1897.

On the question whether rates on grain have declined and to what extent from points of origin to primary markets, the Thirteenth Annual Report of the Minnesota Railroad and Warehouse Commission presents valuable information (pp. 30-48).

Twelve different railway companies in this State report to this commission the percentage of decrease in rates from farm stations to terminal elevators at St. Paul, Minneapolis, and Duluth. The reported rates are from about a hundred country stations to these centers of accumulation. On account of Minnesota being the foremost wheat-growing State, these figures are more truly typical of the general rate situation between farm and terminal market than any others that are available.

Comparison of rates on cereals between stations in Minnesota on February 1, 1885, February 1, 1887, and February 1, 1897.

MINNESOTA DIVISION OF MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RAILWAY COMPANY.

From—	To—	Miles.	Wheat (in cents per 100 pounds).				Other grain (in cents per 100 pounds).			
			1885.	1887.	1897.	Decrease.	1885.	1887.	1897.	Decrease.
						Per ct.				*Per ct.*
Rockford	Minneapolis or St. Paul, Minn.	25	......	6	6	....	......	6	6	....
Annandale	......do	50	......	7½	7½	....	......	7½	7½	....
Eden Valley	......do	75	......	9½	9	5.3	......	9½	9	5.3
Belgrade	......do	100	......	10½	10½	....	......	10½	10½	....
Barrett	......do	150	......	12½	12½	....	......	12½	12½	....
Tenney	......do	200	......	14½	14	3.5	......	14½	14	3.5

On this division grain rates have declined 5.3 per cent from two out of six stations in the course of ten years. Rates have therefore been substantially stationary during this interval.

GREAT NORTHERN RAILWAY COMPANY—WILLMAR, BRECKENRIDGE, AND NORTHERN DIVISIONS.

From—	To—	Miles.	Wheat (in cents per 100 pounds).				Other grain (in cents per 100 pounds).			
			1885.	1887.	1897.	Decrease.	1885.	1887.	1897.	Decrease.
						Per ct.				*Per ct.*
Wayzata	St. Paul, Minn	25	5	5	4½	10	5	5	4½	10
Howard Lake	......do	50	8	8	7	12.5	8	8	7	12.5
Litchfield	......do	75	11	10	9	18.2	11	10	9	18.2
Willmar	......do	100	13	11½	10	23.1	13	11½	10	23.1
Hancock	......do	150	18	15	12	33.3	18	15	12	33.3
Campbell	......do	200	20	17½	14	30	20	17½	14	30
Georgetown	......do	250	23	21	16	30.4	23	21	16	30.4

On this division grain rates have decreased from 10 per cent to 33.3 per cent, along with a general reduction of rates on nearly all other kinds of traffic.

GREAT NORTHERN RAILWAY COMPANY—FERGUS FALLS AND NORTHERN DIVISIONS.

From—	To—	Miles.	Wheat (in cents per 100 pounds).				Other grain (in cents per 100 pounds).			
			1885.	1887.	1897.	Decrease.	1885.	1887.	1897.	Decrease.
						Per ct.				*Per ct.*
Osseo	St. Paul, Minn	25	6	5	4	33.3	6	5	4	33.3
Monticello	......do	50	9	8	7	22.2	9	8	7	22.2
St. Cloud	......do	75	12	10	9	25	12	10	9	25
Albany	......do	100	15	11½	10	33.3	15	11½	10	33.3
Clarissa	......do	150	19	14½	12½	34.3	19	14½	12½	34.3
Carlisle	......do	200	21	17	15	28.6	21	17	15	28.6
Felton	......do	250	23	19	15½	32.7	23	19	15½	32.7
Crookston	......do	300	23	21	16½	28.3	23	21	16½	28.3
Stephen	......do	350	24	22	17½	27.1	24	22	17½	27.1
St. Vincent	......do	400	25	23	18	28	25	23	18	28

Comparison of rates on cereals between stations in Minnesota on February 1, 1885, February 1, 1887, and February 1, 1897—Continued.

On this division reductions in freight rates have ranged from 22.2 per cent to 34.3 per cent during the period in question. Grain rates have been lowered to a greater extent than those on lumber, about as much as those on merchandise, and not as much as those on coal and cattle.

GREAT NORTHERN RAILWAY COMPANY—FERGUS FALLS AND NORTHERN DIVISIONS.

From—	To—	Miles.	Wheat (in cents per 100 pounds).				Other grain (in cents per 100 pounds).			
			1885.	1887.	1897.	Decrease.	1885.	1887.	1897.	Decrease.
						Per ct.				*Per ct.*
Collegeville	Duluth, Minn	150	......	13	12	7.7	......	13	12	7.7
Nelson	do	200	......	13½	14	3.7	......	13½	14	3.7
Parkdale	do	250	......	16½	14½	12.1	......	16½	14½	12.1
Sabin	do	300	......	19	15½	18.4	......	19	15½	18.4
Beltrami	do	350	......	21	16	23.8	......	21	16	23.8
Argyle	do	400	......	22	17½	20.5	......	22	17½	20.5

From the above stations the rates on grain have been lowered from 7.7 to 23.8 per cent—that is, less than those on coal.

NORTHERN PACIFIC RAILWAY COMPANY.

From—	To—	Miles.	Wheat (in cents per 100 pounds).				Other grain (in cents per 100 pounds).			
			1885.	1887.	1897.	Decrease.	1885.	1887.	1897.	Decrease.
						Per ct.				*Per ct.*
Carlton	Duluth, Minn	25	9	8	5½	38.9	9	8	5½	38.9
Cromwell	do	50	13	9½	8	38.5	13	9½	8	38.5
Kimberly	do	75	16	11½	10½	34.4	16	11½	10½	34.4
Deerwood	do	100	18	12½	12	33.3	18	12½	12	33.3
Dower Lake	do	150	20	15	13	35	18	15	13	27.8
Frazee	do	200	22	18	15½	29.6	22	18	15½	29.6
Tenney	do	250	23	20	15½	32.6	23	20	15½	32.6

On this road grain rates have been lowered on an average at least one-third—that is, somewhat more than on merchandise of the last three classes, though not so much as the rates for coal on the longer distances.

CHICAGO, ST. PAUL, MINNEAPOLIS AND OMAHA RAILWAY COMPANY.

From—	To—	Miles.	Wheat (in cents per 100 pounds).				Other grain (in cents per 100 pounds).			
			1885.	1887.	1897.	Decrease.	1885.	1887.	1897.	Decrease.
						Per ct.				*Per ct.*
Shakopee	St. Paul, Minn	25	8	6	6	25	8	6	6	25
Blakeley	do	50	11	8	8½	22.7	10½	8	8½	19
St. Peter	do	75	14	11	10	28.6	12½	11	10	20
Lake Crystal	do	100	15	12	11	26.7	13	12	10½	19.2
Windom	do	150	20	14	14½	27.5	15	14	12½	16.7
Woodstock	do	200	22½	17	17	24.5	17½	17	13	25.7
St. Peter	Duluth, Minn	250	......	26	15	42.3	......	20	15	25
Amboy	do	300	......	28½	16½	42.1	......	20	16½	17.5
Brewster	do	350	......	29	20½	29.3	......	25	16½	34
Beaver Creek	do	400	......	33	22	33.3	......	25	16½	34

Reductions on this line have been most noteworthy throughout. On short-distance grain rates they have averaged from one-fourth to one-fifth, and long-distance rates about one-third.

Comparison of rates on cereals between stations in Minnesota on February 1, 1885, February 1, 1887, and February 1, 1897—Continued.

DULUTH AND IRON RANGE RAILROAD COMPANY.

From—	To—	Miles.	Wheat (in cents per 100 pounds).				Other grain (in cents per 100 pounds).			
			1885.	1887.	1897.	Decrease.	1885.	1887.	1897.	Decrease.
						Per ct.				*Per ct.*
Two Harbors	Duluth, Minn	25	......	10	8	20	......	10	8	20
Cloquet River	......do	50	......	15	12	20	......	15	12	20
Biwabik	......do	75	......	19	12	36.8	......	19	12	36.8
Tower	......do	100	......	19	15	21.1	......	19	15	21.1
Ely	......do	114	......	23	17	26.1	......	23	17	26.1

Wheat rates have here fallen 20 to 36.8 per cent, a greater reduction than in any other rate except that on a single class of merchandise.

CHICAGO GREAT WESTERN RAILWAY—ST. PAUL DIVISION.

From—	To—	Miles.	Wheat (in cents per 100 pounds).				Other grain (in cents per 100 pounds).			
			1885.	1887.	1897.	Decrease.	1885.	1887.	1897.	Decrease.
						Per ct.				*Per ct.*
Hampton	St. Paul and Minneapolis, Minn.	25	12	7	5	58.4	9	7	6	33.3
Kenyon	......do	50	12	9	8½	29.2	10	9	7	30
Dodge Center	......do	75	14	10	9	35.8	12	10	7	41.7
Austin	......do	100	17	11	9	47	15	11	7	53.4

Grain rates have on this division been reduced to a greater extent than have the commodity rates or the coal rates and cattle rates.

DULUTH, SUPERIOR AND WESTERN RAILWAY COMPANY.

From—	To—	Miles.	Wheat (in cents per 100 pounds).				Other grain (in cents per 100 pounds).			
			1885.	1887.	1897.	Decrease.	1885.	1887.	1897.	Decrease.
						Per ct.				*Per ct.*
Catlin, Minn	Cloquet, Minn	25	......	7	7	....	......	7	7	0.3
Swan River	......do	50	......	9	9	....	......	9	9	....
Cohasset	......do	75	......	12	12½	4.2	......	12	12½	4.7
Deer River	......do	100	......	13	16	23.1	......	13	16	23.4

Wheat and other grain rates on this line have been reduced from 0.3 to 23.1 per cent since 1889.

CHICAGO, MILWAUKEE AND ST. PAUL RAILWAY COMPANY—RIVER DIVISION.

From—	To—	Miles.	Wheat (in cents per 100 pounds).				Other grain (in cents per 100 pounds).			
			1885.	1887.	1897.	Decrease.	1885.	1887.	1897.	Decrease.
						Per ct.				*Per ct.*
Etter	St. Paul, Minn., or Minneapolis, Minn.	25	15	8	6	60	8	8	6	25
Frontenac	......do	50	17	11½	8	53	11	11	8	27.3
Kellogg	......do	75	19	13½	10	47.4	12	12	9	25
Minnesota City	......do	100	22	16	12	45.5	12½	12½	10	20

Wheat rates have fallen more than any other rates. The decrease ranges from 45.5 to 60 per cent.

Comparison of rates on cereals between stations in Minnesota on February 1, 1885, February 1, 1887, and February 1, 1897—Continued.

CHICAGO, MILWAUKEE AND ST. PAUL RAILWAY COMPANY—IOWA AND MINNESOTA DIVISION.

From—	To—	Miles.	Wheat (in cents per 100 pounds).				Other grain (in cents per 100 pounds).			
			1885.	1887.	1897.	Decrease.	1885.	1887.	1897.	Decrease.
						Per ct.				*Per ct.*
Farmington	St. Paul, Minn., or Minneapolis, Minn.	25	11	6	6	45.5	8	6	6	25
Erin	do	50	12	8	8	33.3	10	8	7	30
Pratt	do	75	16	11	10	37.5	13	11	9	30.8
Austin	do	100	17	13	10	41.2	15	13	10	33.3

CHICAGO, MILWAUKEE AND ST. PAUL RAILWAY COMPANY—HASTINGS AND DAKOTA DIVISION.

						Per ct.				*Per ct.*
Augusta	St. Paul or Minneapolis	25	8	6	6	25	5	5	6	20
Glencoe	do	50	13	9	8	38.5	10	9	8	20
Buffalo Lake	do	75	15	10½	10½	30	12	10½	10	16.7
Renville	do	100	17	12½	11	35.3	15	12½	11	26.7
Milan	do	150	21	15½	13	38.1	17	15½	13	23.5
Graceville	do	200	17½	17½	13½	22.9	17½	17½	13½	22.9

CHICAGO, MILWAUKEE AND ST. PAUL RAILWAY COMPANY—SOUTHERN MINNESOTA DIVISION.

						Per ct.				*Per ct.*
Ramsey	St. Paul or Minneapolis	100	17	13	10	41.2	15	13	10	33.3
Easton	do	150	18	15	11½	36.1	15	15	11½	23.3
Jackson	do	200	20	16	14	30	17	16	13	23.5
Iona Lake	do	250	21	18	15	28.6	18	18	13	27.8

CHICAGO AND NORTH-WESTERN RAILWAY COMPANY.

From—	To—	Miles.	Wheat (in cents per 100 pounds).				Other grain (in cents per 100 pounds).			
			1885.	1887.	1897.	Decrease.	1885.	1887.	1897.	Decrease.
						Per ct.				*Per ct.*
Janesville	St. Paul, Minn	98	15	12	10	33.3	14	12	10	28.6
Lamberton	do	152	25	13	13	48	17	13	13	23.5
Minneota	do	200	25	14½	14	44	18	14½	14	22.2

On this line the reductions since 1885 have ranged from 22.2 to 48 per cent on wheat and other grain. Wheat has enjoyed a larger reduction than any other form of traffic.

From—	To—	Miles.	Wheat (in cents per 100 pounds).				Other grain (in cents per 100 pounds).			
			1885.	1887.	1897.	Decrease.	1885.	1887.	1897.	Decrease.
						Per ct.				*Per ct.*
Janesville	St. Paul, Minn	98	......	11	11	....	......	11	11	....
Waseca	do	108	......	11	11	....	......	11	11	....
New Ulm	do	109	......	11	11	....	24	11	11	54.2
Owatonna	do	123	......	11	11	....	......	11	11	....
Sleepyeye	do	123	......	11½	11	4.3	25	11½	11	56

Comparison of rates on cereals between stations in Minnesota on February 1, 1885, February 1, 1887, and February 1, 1897—Continued.

CHICAGO AND NORTH-WESTERN RAILWAY—MINNESOTA DISTANCE TARIFF.

Distance.	Wheat (in cents per 100 pounds).				Other grain (in cents per 100 pounds).			
	1880.	1890.	1896.	Decrease.	1880.	1890.	1896.	Decrease.
				Per ct.				*Per ct.*
25 miles	14	7½	7½	46.4	14	7½	7½	46.4
50 miles	16½	10	10	39.4	16½	10	10	39.4
75 miles	19	11¼	11¼	40.8	19	11¼	11¼	40.8
100 miles	22	12½	12½	43.2	22	12½	12½	43.2
150 miles	27	15	15	44.5	27	15	15	44.5

Reductions in rates on wheat and other grain have been remarkably heavy since 1880 on this road, but stationary from 1890 forward.

DULUTH, MISSABE AND NORTHERN RAILWAY COMPANY.

From—	To—	Miles.	Wheat (in cents per 100 pounds).			Other grain (in cents per 100 pounds).		
			1893.	1897.	Decrease.	1893.	1897.	Decrease.
					Per cent.			*Per cent.*
Grand Lake	Duluth	25	7	7	....	7	7	....
Wallace	do.	50	9	9	....	9	9	....
Mountain Iron	do.	75	12	12	....	12	12	....
Virginia	do.	75	12	12	....	12	12	....
Biwabik	do.	75	12	12	....	12	12	....
Hibbing	do.	75	12	12	....	12	12	....

On this line the rates on grain generally, as on eveything else except coal, remained where they were in 1893.

We give below another table, in which comparison of rates on wheat is made for four different dates, ranging from 1873 to 1898. It appears that the greatest reductions in wheat rates from these points to the primary markets of Minneapolis and Duluth occurred between 1880 and 1891. After 1891 the reduction has been comparatively insignificant.

The freight on wheat per 100 pounds, since the settlement of the Red River Valley, from different primary points to Minneapolis and Duluth has been as follows:

[Proceedings, Tri-State Grain Growers, Fa go, N. Dak., January, 1900, p. 196.]

TO MINNEAPOLIS.

From—	Various dates.		Sept. 1, 1891.	Oct. 9, 1895.	July 21, 1898.
	Year.	Rate			
		Cents.	*Cents.*	*Cents.*	*Cents.*
Morris	1873	28	12	12	12
Breckenridge	1872	35	14	14	13
Crookston	1880	27	16¼	16¼	14
St. Vincent	1880	35	18	18	16
Moorhead	1881	25	15¼	15½	14½
Fargo	1881	25	15½	15¼	14½
Glyndon	1881	25	15¼	15¼	14
Fergus Falls	1881	23	14	14	13

TO DULUTH.

		Cents.	*Cents.*	*Cents.*	*Cents.*
Morris	1873	28	[1] 15	15	14½
Breckenridge	1872	35	15	15	14½
Crookston	1880	27	16¼	16½	14
St. Vincent	1880	35	18	18	16
Moorhead	1881	25	15¼	15½	14½
Fargo	1881	25	15½	15¼	14½
Glyndon	1881	25	15¼	15½	14
Fergus Falls	1881	23	14¼	14½	14

[1] This figure in the printed record is given as 45; evidently a misprint for 15.

On the question, to what extent grain rates have declined in the Northwest in territory tributary to Pacific coast markets, the following comparison of rates on wheat from producing points to Portland, Oreg., is submitted from decision No. 384, Interstate Commerce Commission. The table shows various stations, distances to Portland, and wheat rates in force to Portland on January 1, 1888, or dates nearest thereto for which rates are supplied, and in February, 1896—12 years later:

Station.	Distance.	Rate, January, 1888.	Rate, February, 1896.	Decrease.
	Miles.	*Cents.*	*Cents.*	*Per cent.*
Umatilla	186	22	19½	11
Pendleton	231	23½	21¼	5.1
Walla Walla	245	23½	21¼	5.1
Bolles Junction	270	26½	21¼	16
Dayton	282	26½	21¼	16
Riparia	300	30	21¼	29
Pomeroy	322	30	22¼	25
La Crosse	326	[1] 32½	21¼	31.5
Colfax	361	32½	21¼	31.5
Connell	379	[2] 32½	21¼	31.5
Pullman	380	32½	23¾	27
Moscow	389	35	23¾	32
Mullan	476	[3] 45	28¾	36.3

[1] October 10, 1888. [2] March 1, 1889. [3] January 1, 1890.

4. PRODUCTION AND GRAIN TRADE ON THE PACIFIC COAST.

In the grain trade of the United States the movement by way of the Pacific coast is one of rising importance. While the wheat acreage of California is practically stationary, that of Oregon and Washington is increasing.

The relation of the Pacific coast wheat stocks to the visible supplies of wheat in the territory east of the Rocky Mountains is reported for a series of years and monthly for 1899 and 1900.

Total visible supplies of wheat available in the United States and Canada at the dates given, as reported to Bradstreet.

[Crop Reporter, June, 1900.]

[The figures represent stocks of wheat available at 62 of the principal points of accumulation east of the Rocky Mountains, stocks in Manitoba elevators, and stocks afloat on lakes and canals.

Date.	Stock east of Rocky Mountains.	Pacific coast stock.	Date.	Stock east of Rocky Mountains.	Pacific coast stock.
	Bushels.	*Bushels.*		*Bushels.*	*Bushels.*
1890, June 1	30,603,246	3,191,366	1899, July 1	46,870,000	3,109,000
1891, June 1	28,030,334	2,431,280	August 1	48,622,000	4,188,000
1892, June 1	30,249,805	2,425,000	September 1	48,087,000	6,282,000
1893, June 1	90,681,000	3,019,000	October 1	60,040,000	8,858,000
1894, June 1	71,816,000	8,704,000	November 1	77,195,000	11,085,000
1895, June 1	64,375,000	8,445,000	December 1	84,687,000	10,678,000
1896, June 1	68,773,000	2,556,000	1900, January 1	89,285,000	10,022,000
1897, June 1	37,975,000	1,221,000	February 1	87,473,000	8,923,000
1898, June 1	27,179,000	3,236,000	March 1	85,570,000	7,814,000
1899, January 1	50,126,000	5,923,000	April 1	79,630,000	7,207,000
February 1	51,618,000	5,039,000	May 1	70,761,000	7,050,000
March 1	51,085,000	5,104,000	May 5	67,268,000	....
April 1	51,238,000	4,321,000	May 12	63,602,000	....
May 1	47,258,000	4,455,000	May 19	61,079,000	....
June 1	42,092,000	3,635,000	May 26	58,705,000	....

One peculiarity of the Pacific coast wheat lies in its short-rail haul to the coast and the ocean haul to Europe, giving it a relatively low rate of freight from producer to consumer, when compared with Kansas wheat for example. Evidently there is no stable ratio between these two geographical stocks.

(1) STATISTICS OF PRODUCTION AND DISTRIBUTION.

The three States of California, Oregon, and Washington, compared with the country taken as a whole, produced as follows in 1899:

State.	Acres.	Production.	Farm value, Dec. 1.
Washington	956,405	21,710,391	$11,072,301
Oregon	1,143,205	21,919,536	11,633,254
California	2,393,185	33,743,909	20,921,223
United States	41,592,516	547,303,846	319,545,259

Wheat has always been the great staple crop of California, and notwithstanding the rapid extension of the fruit, vine, alfalfa, and beet acreage, it will probably continue to lead the other crops in gross value for many years. The wheat acreage has shown no increase since 1893, and the probabilities are that California has about reached the limit of area sown to this crop. Though formerly first among all the States of the Union, California is now sixth—a place of prominence in comparison with other wheat-growing sections of the world.

The crop of 1899, as will appear from the following table, was a large one:

Acreage and yield since 1893.

Year.	Acreage.	Bushels.	Per acre.	For United States
1893	2,875,307	31,961,559	11.1	11.1
1894	2,587,568	26,071,510	10	13.2
1895	2,033,938	20,779,832	10.2	13.7
1896	2,423,585	29,655,174	12.2	12.4
1897	2,665,943	30,586,310	11.4	11.4
1898		12,404,166		2.2
1899	2,393,185	33,743,909	11.1	12.3

A comparison of the wheat yields of the world and of the United States with that of California will be of interest as showing our relative position. The following table shows that California produces about 6 per cent of the wheat crop of the United States and about 1 per cent of the world's crop:

	1897.	1898.	1899 (estimated).
	Bushels.	*Bushels.*	*Bushels.*
World	2,269,352,000	2,907,000,000	2,540,000,000
United States	530,149,168	710,000,000	547,300,000
California	32,394,020	12,401,166	33,743,909

The prices at which the wheat crop of 1899 sold were low, ranging from $1 to $1.05 per hundredweight. Even at this figure the crop for 1899 was worth between $20,246,000 and $21,258,000. The dry year of 1898 cost California producers a great sum. In wheat alone the yield of upward of 30,500,000 bushels in 1897 was reduced in 1898 to about 12,400,000, and the value of the crop, which in 1897 was about $27,000,000, was cut to about $7,000,000 in 1898.

The following table shows for a series of years the wheat crop of California and distribution, in centals:

California wheat crops and distribution.

Season.	Crop year.	Crop.	Exports.	Local consumption.	Carry-over stock.	Imports.
1887-88	1888	18,643,080	15,138,800	6,315,000	2,394,020	1,067,020
1888-89	1889	25,174,940	17,161,280	6,340,000	5,036,220	768,540
1889-90	1890	18,889,680	17,388,400	6,300,000	1,977,940	1,740,440
1890-91	1891	21,095,440	16,586,380	6,000,000	2,451,000	1,964,000
1891-92	1892	20,445,960	13,189,480	6,300,000	5,727,580	1,520,100
1892-93	1893	19,904,640	11,883,540	6,500,000	7,878,980	1,630,300
1893-94	1894	14,335,844	11,095,480	7,200,000	6,456,000	768,540
1894-95	1895	15,730,004	13,613,980	6,800,000	2,930,700	1,168,560
1895-96	1896	17,452,041	13,152,693	7,000,000	1,990,272	2,060,224
1896-97	1897	18,351,786	12,907,953	6,800,000	3,388,606	2,751,501
1897-98	1898	7,341,220	1,259,913	7,000,000	3,585,606	4,115,693

(2) METHODS OF HANDLING GRAIN IN CALIFORNIA.[1]

Contrary to the custom prevalent in the Eastern and Western States wheat, barley, and all small grains are handled in sacks. These sacks are usually burlaps, 22 by 26 inches, and contain, as a rule, the following amounts in pounds: Wheat, 140; barley, 110; oats, 90; corn, 125; beans, 80. The grain is thrashed in the field and hauled in the sacks to the nearest railroad or shipping station. Quite a large amount of grain is cut and harvested by the combination machine, which cuts, thrashes, and runs grain into sacks, which are sewed as the machine goes along, and the sacks then dumped on the ground, to be gathered up by a wagon which follows for that purpose, and hauled to the interior shipping station, where there are warehouses, the storages rates of which are usually 50 cents per ton of 2,000 pounds, and this covers the storage, as a rule, from the time the grain goes in at harvest time until the 1st day of July in the following year. If the owner of the grain concludes to keep the grain another year the storage rates would be 50 cents per ton by the year. No figures are available as to the cost to the farmer of hauling the grain from his field to the shipping points. The average haul will probably not exceed 8 miles. The grain is purchased by interior buyers or by the agents of San Francisco buyers at the shipping station, payment being made on warehouse receipt or on shipping receipt. Where grain is sent to the large warehouses at tide water for storage sales are made on the warehouse receipts of such houses. The bulk of the wheat and barley shipped from San Francisco is loaded at what is known as Port Costa, where warehouses of the capacity of nearly 250,000 tons are situated. Ships arriving at San Francisco discharge their cargo, as a rule, at the San Francisco wharves, and only load sufficient grain to stiffen them for the purpose of being towed to Port Costa. These warehouses are situated at this point as it is the head of navigation for deep-water vessels in San Francisco Bay, and the railroads which bring the grain to Port Costa would charge an additional 25 cents per ton if the grain was brought to San Francisco. As a ship can be towed from Port Costa and back at an expense varying from $50 to $250, the saving on a 3,000-ton cargo is quite large. The State has no charge of tolls for grain at the San Francisco wharves, and at Port Costa the warehouses and wharves are all in the hands of private owners, each one of whom loads the vessel himself at his individual wharf, and consequently there is no charge for tolls there. Freight rates on iron ships are given in the statistical tables per ton of 2,240 pounds. Prices of wheat are "in store" or "alongside ship," but not f. o. b. To place the grain aboard vessels requires the services of stevedores, and the charge for their services is always paid by the vessel. There has been a marked reduction in these rates during the last 15 years, the going price to-day being 25 cents per ton, as against 40 cents per ton formerly. On grain arriving at tide water there is a charge for weighing, which averages about 8 cents per ton, and this charge is always paid by the grain. Where grain is consigned the usual charge or commission is 25 cents per ton, but the bulk of the crop is bought direct from the farmer by the buyer.

As to the rate from the interior to tide water, statements are given below showing the tonnage and the rate per hundred pounds on the different articles named from various stations. It will be noticed that at times the rate is given to San Francisco and at other times to Port Costa. Where San Francisco is mentioned it means that San Francisco is the natural shipping point for the territory named, and it would cost an additional 50 cents per ton if the grain were to go to Port Costa, and, likewise, where Port Costa is named that is the natural shipping point, and there would be an extra 50 cents per ton it the grain were to go to San Francisco. About 10 per cent of the wheat and barley crops go to tide water by barge or steamer, and the rate will average $1.50 per ton of 2,000 pounds. As to the difference between competitive and noncompetitive points, one does not find any. There is a charge for loading grain on cars in the country of 10 cents per ton; there has also been a charge for discharging at tide water of 10 cents per ton. During the last year this latter rate was waived in some cases, owing to competition of different railroads, but I understand that they have since made an agreement, and the charge will be exacted in future. The storage rates for grain stored in tide-water warehouses has been between 50 cents and 75 cents a ton, according, generally, to the points of the lot taken in store. This coming year, owing to the large crop and large amount in store, the rate will be 75 cents a ton, but for the past few years 50 cents has been the ruling figure.

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[1] Reported by Mr. T. C. Friedlander, special agent, San Francisco, Cal.

(3) Destination of Exports from California by Sea.

The following table shows the destination of the exports of grain from California from July 1, 1898, to June 30, 1899:

WHEAT.

Destination.	Centals.
Ports of call	1,619,756
United Kingdom direct	408,091
Africa	240,223
Miscellaneous	17,792
Total	2,285,862

FLOUR.

Destination.	Barrels.
China	481,178
Central America	182,706
East Indies	72,056
Hawaiian and Pacific islands	79,251
Japan	15,165
Mexico	5,204
Siberia	56,637
South America	13,036
United Kingdom	71,720
Australia	28,570
Miscellaneous	593
Total	1,009,116

BARLEY.

Destination.	Centals.
United Kingdom	187,287
Australia	25,946
Miscellaneous	248,100
Total	461,333

(4) Freight Rates on Cereals to San Francisco Market.

The following table shows freight rates on cereals to San Francisco:

BARLEY.

Shipments from—	Receipts, 1899.	Rate in carload lots, per 100 pounds.
	Tons.	*Cents.*
Salinas to San Francisco	392	14
Sta. Margarita to San Francisco	32	15
King City to San Francisco	70	15
San Luis Obispo to San Francisco	91	11¾
Germantown to San Francisco		13⅛
Dixon to San Francisco		9½

WHEAT.

	Tons.	*Cents.*
Salinas to San Francisco	50	14
Sta. Margarita to San Francisco	337	15
King City to San Francisco	164	15
Germantown to San Francisco		13⅛
Dixon to San Francisco		9½

BARLEY.

Shipments from—	Receipts, 1899.	Rate in carload lots, per 100 pounds.
	Tons.	*Cents.*
Dixon to Port Costa	948	7
Los Banos to Port Costa	71	11¾
Merced to Port Costa	528	11
Marysville to Port Costa	428	10
Willows to Port Costa	31	12
Salinas to Port Costa	1,307	15¼
Sta. Margarita to Port Costa	44	16
San Luis Obispo to Port Costa	54	13¼
Germantown to Port Costa	230	12

WHEAT.

	Tons.	*Cents.*
Los Banos to Port Costa	388	11¾
Merced to Port Costa	127	11
Fresno to Port Costa	415	13¼
Tulare to Port Costa	52	11¾
Marysville to Port Costa	15	10
Dixon to Port Costa	591	7
Willows to Port Costa	1,866	12
Redbluff to Port Costa	646	13¼
Montague to Port Costa	918	17½
Sta. Margarita to Port Costa	35	16
King City to Port Costa	122	16
Germantown to Port Costa	2,010	12

(5) CALIFORNIA WHEAT PRICES FOR THIRTY-FOUR YEARS.

Wheat quotations, 1898–99.—Average, highest, and lowest prices of No. 1 white wheat per cental for each month of the cereal year. Quotations based on actual transactions in the sample market.

Month.	Average.	Highest.	Lowest.	Month.	Average.	Highest.	Lowest.
July, 1898	$1.22½	$1.25	$1.17¼	January, 1899	$1.15	$1.18¾	$1.12½
August	1.18⅞	1.25	1.10	February	1.12½	1.13⅞	1.10
September	1.15⅜	1.20	1.10	March	1.09¾	1.15	1.06¼
October	1.20⅝	1.25	1.15	April	1.07⅜	1.10	1.05
November	1.19	1.23¾	1.15	May	1.08¾	1.12½	1.06¼
December	1.15⅛	1.20	1.12¼	June	1.11	1.12½	1.10

Wheat quotations for a series of years.—The average, highest, and lowest prices of No. 1 white wheat, spot, each year since 1865–66 have been as follows:

Year.	Average.	Highest.	Lowest.	Year.	Average.	Highest.	Lowest.
1898–99	$1.14½	....	$1.05	1881–82	$1.60	$1.75	$1.30
1897–98	1.47⅛	$1.82½	1.20	1880–81	1.42⅞	1.62½	1.25
1896–97	1.26¾	1.57½	.90	1879–80	1.82	2.15	1.45
1895–96	1.01⅞	1.17½	.88¾	1878–79	1.67¾	1.77½	1.57½
1894–95	.87½	.95	.76¼	1877–78	2.18	2.45	1.82½
1893–94	1.01¼	1.16¼	.90	1876–77	1.92¼	3.00	1.45
1892–93	1.27⅖	1.37½	1.17½	1875–76	1.93½	2.32½	1.67½
1891–92	1.63⅜	1.90	1.38¾	1874–75	1.62	1.85	1.52½
1890–91	1.46¼	1.85	1.27½	1873–74	2.05¼	2.35	1.70
1889–90	1.28⅘	1.38¾	1.25	1872–73	1.76¼	2.05	1.50
1888–89	1.34⅓	1.65	1.26¼	1871–72	2.31	2.82½	1.87½
1887–88	1.40¼	2.00	1.22½	1870–71	2.20½	3.10	1.65
1886–87	1.52⅕	1.87½	1.20	1869–70	1.69	1.82½	1.55
1885–86	1.43⅛	1.52½	1.17½	1868–69	1.87	2.12½	1.55
1884–85	1.31⅞	1.50	1.15	1867–68	2.36	3.05	1.67½
1883–84	1.64⅔	1.90	1.42½	1866–67	1.73	2.15	1.35
1882–83	1.73½	2.05	1.60	1865–66	2.11	4.75	1.62½

(6) FREIGHTS ON WHEAT TO EUROPE.

The following table shows the average, highest, and lowest rates paid for iron wheat ships each month of the cereal year 1898–99, the figures being for spot engagements for Cork, f. o. U. K., Havre or Antwerp, per ton of 2,240 pounds.

Monthly rates, 1898–99.

	Average.				Highest.				Lowest.			
	£.	s.	d.		£.	s.	d.		£.	d.	s.	
1898.												
July	1	6	9	$6.48	1	7	6	$6.67	1	5	0	$6.06
August	1	6	3	6.36	1	6	3	6.36	1	6	3	6.36
September	1	4	0	5.82	1	4	3	5.88	1	3	9	5.75
October	1	6	0	6.30	1	11	3	7.52	1	3	9	5.75
November	1	10	0	7.27	1	13	9	8.18	1	6	3	6.36
December	1	5	9	6.24	1	6	3	6.36	1	5	0	6.06
1899.												
January	1	6	1	6.32	1	7	0	6.55	1	5	0	6.06
February												
March	1	2	6	5.45	1	2	6	5.45	1	2	6	5.45
April	1	3	7	5.71	1	5	0	6.06	1	5	6	5.45
May	1	5	9	6.24	1	6	6	6.42	1	6	6	5.94
June	1	9	4	7.11	1	12	6	7.88	1	12	3	6.36

[1] No spot transactions.

Average rate for season for nineteen years.

[Per ton, 2,240 pounds.]

Year.	Wood.				Iron.				Year.	Wood.				Iron.			
	£.	s.	d.		£.	s.	d.			£.	d.	s.		£.	s.	d.	
1898–99					1	6	0	$6.30	1888–89	1	8	3	$6.85	1	12	7	$7.90
1897–98					1	8	0	6.79	1887–88	1	5	6	6.18	1	6	2	6.31
1896–97	1	6	3	$6.36	1	3	9	5.75	1886–87	1	6	1	6.32	1	8	2	6.83
1895–96	1	7	0	6.55	1	1	6	6.42	1885–86	1	9	3	7.09	1	12	6	7.88
1894–95	1	5	6	6.18	1	7	0	6.55	1884–85	1	14	2	8.28	1	18	0	9.21
1893–94	1	5	3	6.12	1	7	7	6.69	1883–84	1	5	8	6.22	1	14	8	8.40
1892–93	0	19	6	4.73	1	2	8	5.49	1882–83	2	3	6	10.55	2	6	9	11.33
1891–92	1	11	11	7.74	1	11	1	7.54	1881–82	3	5	7	15.90	3	1	3	16.30
1890–91	1	18	10	9.41	2	1	11	10.17	1880–81	3	6	9	16.18	3	13	0	17.67
1889–90	1	13	3	8.10	1	17	3	9.03									

Prior to 1880, rates for iron and wooden ships were not separated, but the following rates are quoted for a series of years, the highest rate being £5 13s. for the wooden ship *Agenor* to Liverpool direct.

Old records.

Year.	Average.				Highest.				Lowest.			
	£.	s.	d.		£.	s.	d.		£.	d.	s.	
1879–80	2	15	0	$13.30	3	10	0	$16.97	1	19	0	$9.45
1878–79	2	10	0	12.12	3	0	0	14.55	1	10	0	7.27
1877–78	2	0	0	9.70	2	10	0	12.12	1	12	0	7.76
1876–77	3	0	0	14.55	3	12	0	17.46	1	17	0	8.97
1875–76	2	10	0	12.12	3	2	6	15.15	2	0	0	9.70
1874–75	3	10	0	16.97	4	11	6	22.18	2	0	0	9.70
1873–74	4	2	6	20.00	5	5	0	25.46	3	10	0	16.97
1872–73	4	5	0	20.61	5	42	0	27.40	3	0	0	14.55

5. WHEAT PRODUCTION IN WASHINGTON AND OREGON.

Wheat is the great staple crop of Oregon. The relative importance of wheat and other cereal products of Oregon to other farm products is shown for 1899 herewith.

(1) OREGON STATISTICS FOR 1899.

[From the Portland Oregonian.]

		Quantity.	Value.
Corn	bushels	344,161	$172,080
Wheat	do	23,649,334	10,672,200
Oats	do	5,201,232	1,560,369
Hay	tons	1,142,293	6,853,758
Potatoes	bushels	5,126,241	1,537,872
Wool	pounds	18,028,276	2,163,393
Sugar beets	tons	11,295	50,827
Hops	pounds	14,400,000	1,296,000
Poultry and eggs			4,512,719
Fruit crop			272,050
Butter, cheese, and milk			5,459,469
Sales of stock			9,500,000
Rye and barley, and miscellaneous			1,500,000
Total			45,550,737

The developing of large milling interests in Washington and Oregon has made a domestic demand for wheat which is partly recorded in the following statistics of shipments of flour since 1890–91.

In 1890–91 the first shipment, 23,921 barrels of flour, was made from Puget Sound, and from that year to the present time the records have been kept together in values, and are as follows:

Season.	Cargoes.	Barrels flour.	Centals wheat.	Value.
1890-91	45	23,921	2,404,993	$3,419,860
1891-92	48	90,363	2,151,776	3,600,442
1892-93	62	169,553	2,530,786	3,631,374
1893-94	52	300,563	2,290,542	2,846,581
1894-95	47	257,618	2,276,454	2,370,563
1895-96	45	338,993	1,509,563	2,331,077
1896-97	68	426,157	1,449,175	3,551,237
1897-98	115	507,150	4,741,804	7,523,263
1898 to December	44	251,294	1,407,323	2,417,526
Total	526	2,368,612	20,762,116	31,697,923

The centals of wheat expressed in bushels make 41,288,120 bushels of wheat that have been shipped by ocean vessels from Puget Sound.

(2) ESTIMATED COST OF PRODUCTION OF WHEAT.

Cereals, it appears, comprise nearly one-third of the value of the Oregon farm crops, and the wheat crop is valued at two-ninths of the annual farm income.

The position of producers, large and small, is further described by the Washington commissioner of labor as follows in their relation to the market:

"The cost of harvesting, thrashing, and sacking a bushel of wheat is variously estimated to be from 10 cents to 12 cents, and when all other expenses of producing a bushel of wheat are included it brings the cost of production up to about 28 cents per bushel. So that while it is true that the farmer who raises 1,000 acres or more of wheat can realize cost on his labor and interest on his capital and live when he gets 30 cents per bushel for his wheat, it is equally true that the small farmer must realize from 45 cents to 50 cents per bushel for what he has to sell or he must fail. This fact, added to his disadvantage as a debtor, is tending toward the absorption of our wheat lands, as with our grazing lands, by large land owners, who can produce cheaper in all seasons, and are always the favored debtor of the professional creditors, which enables them to retain their lands during a failure of crops or profitable prices, while the small land owner must lose his accumulations and his home and become a tenant or wage worker."

From the same source the development of the grain market and shipping ports is described. Formerly grain grown in eastern Washington found its way down the Columbia to Portland, Oreg., and thus added much to the importance claimed by Oregon as a wheat-growing State. As early as 1881, however, the farmer began sending wheat over the mountains to tide water by the Northern Pacific Railway. This naturally led to the construction of elevators and flouring mills and finally to making the ports of Seattle and Tacoma great wheat-shipping points, as will be seen by a study of the following table, which gives a summary of the wheat shipments by cargoes and centals (100 pounds) from Puget Sound, from 1881 to 1889–90. Shipments from 1890-91 to December, 1898, are given in the previous table.

Beginnings of Puget Sound wheat trade.

Season.	Cargoes.	Centals.	Value.
1881–82	1	38,216	$51,000
1882–83	2	129,000	207,000
1883–84	1	44,923	67,384
1884–85			
1885–86	3	140,920	185,860
1886–87			
1887–88	11	717,510	$891,585
1888–89	27	1,774,139	2,468,595
1889–90	22	1,167,758	1,522,140

(3) Local Warehousing System in Washington and Oregon.

The system of marketing cereals, wheat and oats especially, in the States of Oregon and Washington involves very direct relations between the farmer and the foreign market, to which most of the surplus wheat crop of that section goes. The grain is hauled directly from the thrasher to the warehouses along the river or railroads, for sale or storage in sacks; usually the farmer buys the sacks of the warehouseman, who receives the grain as security for the sacks. With wheat selling at 34 cents, the price of sacks being 8 cents, one can readily figure on the proportion that must be paid over to the buyer for sacks. A 2-bushel sack would net the producer 60 cents.

The warehouses on the railroads or rivers are usually operated in the interest of milling, exporting, or speculative dealers. A small proportion of the grain is stored by farmers who own and operate their own warehouses. A still smaller proportion of farmers store in the granaries on their own farms.

But few men are found willing to mix their wheat in an elevator and then draw out their exact number of pounds, owing to the fact that this grain is so dry when taken from the field where it was exposed to the hot sunshine, that while in storage it usually gains enough in weight to pay expense of storage. This has led knowing men to mark their sacks and have them piled together and thus get all there is due them.

Some farmers of late years have shipped their grain to the Puget Sound cities, and a few to Portland, Oreg., and stored it there, and in this way secured advantages of sudden rises in the markets. Railroad men have not been in the habit of buying grain unless under another name, but during the last year they put up immense warehouses.

The large wheat-buying firms of Portland and San Francisco have local buyers to represent them at railroad stations and steamboat landings. They receive the grain from the farmers, giving receipts for the same with no storage charges for about six months. Should the farmer not desire to sell at the time of delivery, those who wish to sell, and perhaps have to sell, must take what is offered. It is constantly assumed among producers that there is an understanding among buyers to keep prices down, especially in the case of wheat. This system pays the warehouseman 50 cents per ton handling charges till January 1, following the harvest, and 10 cents per ton per month thereafter. The commission paid local buyers is about 1 cent per bushel. The system is not regarded as satisfactory from the producers' standpoint. A correspondent writes:

"The warehouse system here is unquestionably a detriment to the farmer, for whenever the grain is warehoused the local buyer understands that unless the farmer sells by January 1 he has storage to pay, and the wheat all being in sight he knows about how much will be offered and arranges his prices accordingly. Then quite a number of crops, say one-third to one-half, are mortgaged to the local banker, merchant, or other dealer, and this wheat must all be thrown on the market, usually in ninety days from the time it is harvested, and this virtually makes the price for the balance. The price of wheat here now is 34 cents, the cost of getting it to tide water and local buyer's profit is about 14 cents, which, you will perceive, is over 40 per cent of net price paid producer."

(4) THE MOVEMENT OF CEREALS TO SEABOARD.

In the movement of grain in the States of Washington and Oregon from farmers' station to seaboard, railway and water facilities should naturally afford a good deal of competition among carriers. From both of these States, as well as from California, the bulk of the surplus wheat goes to England by way of Cape Horn—a distance of 17,000 miles to Liverpool. A freight rate, for the first hundred miles, from farm to Portland, is given as 12 cents per bushel on wheat, for which the producer received 40 cents per bushel.

Itemized expenses of marketing grain at Portland, Oreg.[1]

Year and month of sale.	Kind and grade of product.	Consumer paid per bushel.	Producer received per bushel.	Combined expenses of distribution between producer and consumer per bushel.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.
		Cents.	*Cents.*	*Cents.*	*Per cent.*	*Per cent.*
July, 1899	Wheat, No. 1	58	44⅓	13⅔	23.57	76.43
January, 1900	do	52	38⅓	13⅔	26.29	73.71
Average	do	55	41⅓	13⅔	24.86	75.14
July, 1899	Oats, No. 1	44	36.7	7.3	16.5	83.5
January, 1900	do	35	27.93	7.07	20.2	79.8

Cost of distribution of wheat between producer and Liverpool.

		Cents.	*Cents.*	*Cents.*	*Per cent.*	*Per cent.*
July, 1899	Wheat, No. 1	80.63	44⅓	36.30	45.02	54.98
January, 1900	do	79.45	38.33	41.12	51.76	48.21
Average	do	80.04	41.33	38.71	48.36	51.64

Distribution to seaboard thus costs one-fourth of the value of the wheat and about one-fifth of the value of the oats. Distribution to Liverpool costs about half of the value to the consumer of wheat.

EXPLANATIONS.

The visible supply of wheat from Oregon, Washington, and Idaho is held at Portland, Seattle, and Tacoma. These are common points having the same freight rates from all parts of the three States. The milling price at interior mills and at tide water is governed entirely by export values at these ports, the producer securing the same price from both millers and exporters. In the figures given above No. 1 Walla Walla or "club" wheat is taken as the standard. Freight rates from which the above figures were averaged were as follows: To tide water, per bushel of 60 pounds, from Pendleton, Oreg., 10½ cents; Heppner, Oreg., 11 cents; Walla Walla, Wash., 10½ cents; Colfax, Wash., 12¾ cents; Pomeroy, Wash., 12¾ cents; Salem, Oreg., 4½ cents. Average, 10⅓ cents per bushel. This is a fair average for the entire territory. All wheat must be sacked for delivery, the cost of burlap sacks during the time mentioned being 3⅓ cents per bushel, which is added to the expense of distribution.

The supply of oats for the Portland market comes principally from the Willamette Valley, Eugene 123 miles, Albany 80 miles, Salem 52 miles, and Gervais 41 miles from Portland being good shippers. Supplies are also received from Fishers Landing, Wash., and from Dayton, Oreg., on the Yamhill River, as well as a number of other points of minor importance. All of the points mentioned have the benefit of river competition in the regulation of freights, and the rate to Portland ranges from $1.50 to $3 per ton, the average from all points being about $2.50 per ton, or 3.7 cents per bushel of 32 pounds, that being the unit of measure by which the grain is handled. The oats are all shipped in sacks at a cost of about 2½ cents per bushel and a commission of 2½ per cent is charged by commission houses for selling. Several thousand bushels of oats are produced within 15 or 20 miles of Portland, and the most of them are hauled by team to the city and sold direct to the consumer at the same price as that given above, the producer thus saving all expense, as he takes the sacks back with him when delivering direct.

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[1] Reported by Mr. E. W. Wright, special agent, Portland, Oreg.

The cost of distribution from the time the wheat leaves the car at tide water is figured at 32s. 6d. per ton of 2,240 pounds freight as the minimum since July 1, 1899, and the exporters charge for floating it 1¼ cents per bushel. The rates at the present time and for the past 6 months are abnormally high, but for the cereal year July 1, 1899, to July 1, 1900, they will average at least 36s. 3d. The average for the five years previous to 1899 was about 32s. 6d., the minimun figure for the present season.

(5) COASTWISE MOVEMENT OF CEREALS.

The movement of cereals in coastwise commerce on the Pacific coast is largely measured by the imports at San Francisco from Oregon and Washington by sea.

Imports to San Francisco from Oregon and Washington by sea.

Year.	Flour.	Wheat.	Barley.	Oats.
	Quarter barrels.	*Centals.*	*Centals.*	*Centals.*
1897-98	1,453,240	1,209,382	251,471	519,191
1896-97 *a*	1,261,117	575,282	....	320,078
1895-96	1,075,038	466,136	69,166	509,914
1894-95	1,282,101	1,542,748	416,515	515,545
1893-94	677,588	1,141,993	102,970	388,598
1892-93	491,703	1,225,844	1,828	284,102
1891-92	474,653	1,613,718	53,272	447,204
1890-91	362,441	1,412,358	266,585	381,066
1889-90	326,184	573,595	....	416,371
1888-89	413,062	831,107	....	541,675
1887-88	434,938	1,183,727	....	289,261

a In addition by rail from Arizona, 3,360; Utah, 517,605; Nevada, 2,680; Idaho, 74,665; Oregon, 37,515 centals of wheat; from east of Rockies, 35,570 centals of corn and 46,025 centals of oats.

6. FACILITIES FOR HANDLING GRAIN AT PORTLAND, OREG.[1]

The facilities for handling grain at this point are among the most economical on either the Pacific or the Atlantic coast. The docks are arranged parallel with the river, as flat warehouses, not elevators, and are built in two tiers for the convenience of handling in high or low water. All grain docks have tracks right to their doors, so the grain is taken from cars to ship with simply a truckage across the dock in the event of the wheat being immediately shipped. From the side of the dock the wheat is loaded into the vessel's hold on chutes by gravity, and it is a very common occurrence for ships carrying 3,000 to 3,500 tons dead weight to be loaded in 3 or 4 days. In case of the cargo being on the lower dock, or possibly in case of high water, wheat or flour is loaded up from the dock over the ship's side by means of patent electric conveyors, with a system of belts which carry up the bags in rapid succession. All wheat or flour is loaded in bags, not shipped in bulk or barrels. The railroad tracks go to all grain-loading docks, flour mills, and lumber mills in and about the city. All grain docks are fitted with conveyors, cleaners, graders, smutters, etc., and are practically elevators. The bulk of the grain is brought here in cars, though some comes by river steamers, for whose accommodations slips are provided at the docks.

At the docks (using this word as it is usually done locally, meaning warehouses) 350 cars of wheat or grain can easily be taken care of per day. The usual charge for storage is 40 cents per ton, which includes the labor of discharging cars, trucking across the dock to ship, and 60 days' storage. We give below a schedule showing the usual charge for cleaning and grading, etc., when wheat is simply stored, but this is subject often to agreement, according to circumstances. At other than wheat docks all merchandise pays a wharfage of 25 cents per ton of 2,000 pounds. There are a number of these other docks at which the river boats land with produce from all around the surrounding country, both on the Willamette and Upper and Lower Columbia rivers, and which are conveniently arranged for the transfer of freight. There are 14 wheat docks, several of which can load two ships at once, their aggregate capacity for grain being about 222,500 tons of 2,000 pounds, and at all of these docks vessels of the largest size can load.

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[1] Reported by J. N. Fleischner, secretary Portland Chamber of Commerce.

In addition to the docks mentioned there are two or three others which are used almost exclusively for the shipment of steamer freight to the Orient, Alaska, etc., or for transports—in fact, general steamer business outside of grain or flour. The bulk of the grain shipments (foreign) consists of wheat, barley, flour. Large quantities of linseed are brought here, but the larger proportion is manufactured locally.

The following memorandum of port charges and regulations indicate a species of commercial expense not usually obtainable. They are therefore indicated here.

(1) MEMORANDUM OF PRINCIPAL CHARGES AT PORTLAND, OREG.[1]

Towage.—From sea to Portland and to sea:

1,500 to 1,800 tons register	$700
2,500 to 3,000 tons register	850
Other sizes of vessels in proportion.	
Tug's hawser, when used, each way	15

Pilotage.—Bar pilotage is compulsory inward, the rates being $5 per foot draft and 2 cents per register ton. Pilotage is optional outward to the extent of half. River pilotage is optional between Astoria and Portland, and vice versa, the rates being $2 per foot draft and 2 cents per ton register. There is a fine pilot schooner outside the bar with a full supply of competent pilots, and also the pilots are often on the tugboats. There is also a light-ship outside the mouth of the river, there all the time except, perhaps, a short time in the summer, when she is brought in for repairs and a buoy placed at her anchorage.

Lighterage.—This is not now necessary, owing to the deepening of the river, but in the event of a very deep ship requiring lighterage the Oregon Railroad and Navigation Company takes the lighterage free on outward cargo. The usual rate for inward cargo is $1 per ton of 2,000 pounds, or 40 cubic feet.

Draft of water.—On the Columbia River bar there are 30 feet of water at mean low tide, with a rise of 7 to 9 feet. In the river vessels drawing 23 feet can readily go up and down.

Customs charges.—United States tonnage dues, 6 cents per register ton each time of arrival in an American port, but not exceeding five times in one year; that is, after five times the vessel is free. Entrance and clearance, $5 each, internal-revenue tax. Other customs charges for entrance and clearance amount to, say, $15 total.

Ballast.—Discharging, 25 cents per ton of 2,240 pounds; hauling away from dock, 30 cents per ton of 2,000 pounds. Good ballast can be bought for ships at from 60 cents to 75 cents per ton of 2,240 pounds, according to weight per cubic yard.

Stores and provisions.—As reasonable and of excellent quality as can be had at any Pacific coast port.

Water for ship's use.—Free. Vessels mostly fill their tanks going down the river, the towboat being willing to furnish the hose.

Wharfage.—Free to ships. All goods pay wharfage of 25 cents per ton.

Moves in port.—Towboat charges, $20 for sailing ship, $25 for steamer. No pilotage necessary. Fine, powerful towboat on the bar.

In case of vessels loading wheat or flour, etc., for Europe, they have to line inside with lumber and cover the same with burlap or old sails. There are several ship carpenters in this business, and rates are reasonable.

Stevedore rates.[1]—

	Cents.
Discharging:	
Ballast or cement, per ton of 2,240 pounds	25
Coal	27½
General merchandise	30
Glass	35
Loading:	
Wheat or flour, per ton of 2,240 pounds	25
Barley	25
Lumber and timber, per mille	90
Railroad sleepers, per mille	70

Ballast logs will be furnished by the ship liners for $25, without regard to time, and any size will be given. If two on each side are not sufficient, four are provided, and they frequently are 5 to 7 feet diameter. It has now come to be almost universal to take ballast logs instead of ballast or instead of the ship calling for stiffening, in which case she may have to make several moves.

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[1] Furnished by Taylor, Young & Co.

In case of vessels coming to Astoria for orders and leaving in ballast or in the same condition as they come in, they are charged 25 per cent of the towage tariff, and of course have to pay pilotage. Orders can be given to ships off the port, ordering them to another port, for which service [illegible] pilots charge $100.

(2) SCHEDULE OF GRAIN WAREHOUSING CHARGES AT PORTLAND, OREG.

Fire-insurance premiums, per annum	$1.50
Grading, cleaning, etc, including smutting when the latter operation is not performed by itself, per bushel	.01½
Smutting, when performed by itself, per bushel	.02
Wharfage, including 60 days' storage, per ton	.40
Storage, after 60 days, per ton per month	.12½

IV.—VISIBLE SUPPLY AND THE LEVEL OF PRICES.

1. THE VOLUME OF THE VISIBLE SUPPLY OF GRAIN.

The visible supply of grain in the United States consists of stocks which have left the farmers' hands, and are held by buyers in elevators and warehouses for future sales. These stocks include quantities afloat on lakes, rivers, and canals, and all other stocks whose destination does not exclude them from being available for the commercial, consumptive, or speculative demands.

This visible supply throughout the surplus grain States and along the waterways for traffic in the first three months after harvest approximates 100,000,000 bushels of the five leading cereals, and it falls as low as 25,000,000 in the months just before harvest; but at no time is the normal maximum much over 100,000,000 bushels or the normal minimum much below 25,000,000 bushels. A hundred million bushels of grain in visible supply depresses the markets enough to tempt foreign buyers to take it off at the low price which such surplus insures, and a minimum supply of 25,000,000 of bushels is usually low enough to bring domestic milling interests into the market for the reduced surplus. Regardless of the size of the crop, therefore, the very existence of this available supply exerts a marked influence on the relations between producer and consumer.

Visible supply of grain in the United States.

	Bushels.
Minimum visible supply:	
1897, July 17	40,513,000
1898, August 27	25,540,000
Maximum supply:	
1897, November 27	100,461,000
1898, January 15	101,768,000
Minimum visible supply, 1899, June 1	32,406,000
Maximum visible supply, 1900, January 1	123,646,000
Grain in storage in Chicago:	
Minimum—	
1899, July 24	11,242,261
1898, August 27	6,654,846
Maximum—	
1899, December 25	27,902,857
1898, January 15	28,665,488

2. THE GEOGRAPHICAL DISTRIBUTION OF THE VISIBLE SUPPLY.

The wide distribution of visible supply is still another feature of the grain trade. Sometimes as many as 70 different points are reported as having grain in storage to the amount of at least 1,000 bushels each. Holdings of a smaller amount are seldom recorded in the statements of visible supply available for commercial demands. In the following statement of the monthly stocks 47 points are represented. The figures are from *Bradstreet*, and include Canadian points of primary importance.

The visible supply of grain is made known to the consuming world in published statements of weekly stocks in regularly authorized warehouses at prominent grain centers in the United States and Canada. The California and Pacific coast stocks are given for wheat only and comprised, in 1898, from 5 to 7½ per cent of the accumulated stocks reported monthly east of the Rocky Mountains, at 51 principal points of accumulation.

In referring to the visible supply of grain in the United States, unless otherwise specified the stocks east of the Rocky Mountains will be understood. These stocks comprise over 90 per cent of the total surplus stock. They include not only the elevator and warehouse stocks, but also the quantities afloat on the lakes and the Erie Canal. Visible supply therefore includes all grain not disposed of with reference to ultimate distribution, but easily obtainable to influence the markets or to supply any unexpected demand.[1] It is commercially free grain in the country of production that has passed out of the farmer's hands, but is not yet afloat for foreign shipment or engaged for domestic consumption.

The most detailed statement of visible supplies of grain in the United States and Canada is given in Bradstreet's at the end of each week. These figures are gleaned by a staff of correspondents located at the points at which the visible supplies are accumulated. The results of their combined reports are telegraphed at once from New York to every grain-selling and grain buying center in America and Europe. The following table gives the visible supply of the five leading cereals on the dates and months specified. Under Minneapolis the private elevator stocks are included. Under Milwaukee and Chicago both the quantities "afloat" and private elevator stocks are included. In a general way these figures locate the principal surplus stocks for a year, showing their geographical distribution.

Monthly visible supply of grain at forty-seven points of accumulation.

[Compiled from Bradstreets. In thousands of bushels.]

	Mar. 4, 1899.	Apr. 1, 1899.	May 6, 1899.	June 3, 1899.	July 1, 1899.	Aug. 5, 1899.	Sept. 2, 1899.	Oct. 7, 1899.	Nov. 4, 1899.	Dec. 2, 1899.	Jan. 6, 1900.	Feb. 10, 1900.
Minneapolis	12,876	13,745	12,111	9,330	10,008	9,293	5,703	6,983	10,572	13,611	15,027	16,280
Duluth	13,632	18,781	19,468	10,504	7,421	5,836	3,509	6,110	8,737	9,228	7,710	8,878
Omaha and Council Bluffs	414	404	365	212	335	245	383	695	1,237	1,295	1,370	1,725
Milwaukee	4,813	5,960	2,262	1,825	1,639	1,383	1,219	1,291	2,104	2,059	3,224	3,848
Burlington	546	479	368	252	452	400	311	500	495	469	117	160
Davenport	165	155	100	80	65	45	45	90	95	135	130	130
N. W. interior stocks	5,500	4,600	3,200	2,800	2,100	2,100	3,000	5,950	7,600	9,750	13,700	16,300
Kansas City	1,598	1,298	1,960	981	1,276	1,360	1,994	2,285	2,497	2,423	2,308	2,391
St. Joseph	173	177	192	161	144	109	183	259	228	332	369	......
Chicago	21,856	36,823	29,785	20,503	20,838	18,334	16,246	23,992	28,040	27,801	31,452	32,079
Peoria	1,061	819	424	391	487	219	496	1,070	1,056	909	742	1,011
Joliet	122	489	338	342	420	436	444	513	535	395	428	501
Kankakee	447	101	56	110	201	106	177	237	222	215	325	217
Cairo	324	303	297	200	282	90	107	......	412	334	434	499
Quincy	50	40	20	39	40	60	70	82	60	34	31	25
East Dubuque	98	38	401	77	131	123	136	94	105	97	109	111
Indianapolis	430	332	226	175	154	726	780	687	701	485	479	422
St. Louis	3,155	1,962	485	378	774	1,446	2,220	2,763	2,899	2,738	2,513	2,612
Louisville	882	584	423	391	219	539	978	1,093	1,162	1,344	1,113	889
New Orleans	1,956	1,898	1,205	518	525	953	622	1,640	1,815	1,581	1,852	1,590
Galveston	1,515	1,096	947	723	679	1,032	1,133	1,089	969	1,680	1,920	1,189
Detroit	790	673	535	208	286	319	608	725	941	1,250	1,279	1,081
Grand Rapids	41	37	36	30	51	39	67	38	......	25	48	22
Lansing	18	21	12	17	16	16	17	10	16	19	22	12
Port Huron	928	694	485	1,192	756	1,048	836	666	1,356	1,158	1,205	1,063
Toledo	1,658	1,158	568	604	2,379	2,192	3,200	3,553	3,838	2,582	2,459	2,262
Cleveland	105	110	73	196	242	314	207	115	147	217	457	437
Cincinnati	168	169	69	3	......	36	45	61	87	121	97	126
Akron	229	341	318	273	166	167	319	534	207	295	267	394
Wheeling	10	13	11	16	7	6	90	9	9	9	8	9
Pittsburg	118	113	66	96	92	50	72	161	177	264	255	263
Buffalo	3,589	1,214	73	1,190	1,407	2,577	3,961	3,280	3,961	3,536	6,671	4,148
Rochester	238	255	163	141	157	156	195	166	193	465	482	277
Syracuse	54	53	9	35	57	65	59	58	68	54	38	......
Oswego	175	129	20	25	60	......	......	10	60	76	80	......
Ogdensburg	180	150	100	40	254	117	105	117	170	307	686	560
Albany	85	90	40	85	155	......	5	......	......	......	......	16
Portland, Me	778	766	703	254	225	323	313	95	211	726	605	830
Boston	1,377	1,554	635	1,060	951	1,345	1,595	1,021	742	1,216	1,342	1,605
New York	5,636	3,564	1,584	1,967	2,802	5,495	5,793	6,702	8,155	6,752	5,870	3,853
Philadelphia	2,175	1,164	411	1,997	1,298	2,312	1,034	1,402	1,494	1,840	1,825	1,720
Baltimore	1,753	2,068	247	2,080	2,045	3,112	2,589	6,670	8,154	6,619	5,870	3,843
Newport News	836	1,166	247	627	972	851	674	1,403	1,514	1,740	1,725	1,720
Montreal	324	495	738	953	1,066	770	608	585	728	475	354	399
Toronto	138	96	68	60	75	91	77	131	131	111	117	96
Kingston	295	100	96	201	157	34	......	145	68	136	190	130
Winnipeg	475	5,910	456	360	312	240	193	175	205	280	938	345
Total	93,296	112,200	91,815	32,406	42,399	66,536	48,193	70,172	97,952	92,018	123,646	113,738

Average per month, 82,102,000 bushels.

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[1] Report of Trade and Commerce of Chicago, 1898, p. 27.

3. VISIBLE SUPPLY ON FIRST OF EACH MONTH, 1890-1899.

The two most important cereals for distribution are corn and wheat. Though corn production is three to five times as large as wheat production, and though we export on an average one hundred and eighteen millions of bushels of corn to ninety and a half millions of bushels of wheat, it is the wheat that constitutes the larger factor in the visible stock on the open market throughout the year. The following tables illustrate this difference for a series of years from 1890 to 1899:

Visible supply of wheat the 1st of each month.

[From the Cincinnati Price Current.]

	1899.	1898.	1897.	1896.	1895.
January	26,893,000	38,816,000	54,651,000	69,958,000	88,561,000
February	28,583,000	36,602,000	49,591,000	66,734,000	81,665,000
March	29,920,000	31,088,000	43,797,000	64,089,000	79,476,000
April	29,985,000	30,223,000	39,023,000	61,048,000	74,308,000
May	28,144,000	23,263,000	34,412,000	55,519,000	65,776,000
June	24,192,000	23,672,000	26,897,000	50,340,000	52,229,000
July	33,587,000	14,701,000	18,794,000	47,860,000	44,561,000
August	36,019,000	9,093,000	17,814,000	46,734,000	39,229,000
September	34,768,000	5,927,000	15,473,000	45,574,000	35,438,000
October	42,143,000	11,263,000	21,104,000	48,715,000	40,768,000
November	49,561,000	15,476,000	26,974,000	58,680,000	50,186,000
December	55,758,000	23,369,000	33,656,000	58,914,000	63,903,000
	1894.	1893.	1892.	1891.	1890.
January	80,288,000	81,238,000	45,908,000	25,178,000	33,972,000
February	80,264,000	81,487,000	43,118,000	23,592,000	31,488,000
March	77,257,000	79,463,000	41,111,000	22,926,000	28,996,000
April	71,458,000	77,654,000	41,036,000	22,764,000	27,116,000
May	66,583,000	75,027,000	37,936,000	20,980,000	23,982,000
June	59,394,000	70,159,000	29,522,000	17,493,000	22,453,000
July	54,657,000	62,316,000	24,262,000	13,590,000	20,174,000
August	57,144,000	59,319,000	23,992,000	16,768,000	18,463,000
September	66,949,000	56,881,000	36,260,000	19,124,000	17,640,000
October	71,413,000	60,528,000	47,901,000	26,862,000	16,800,000
November	78,190,000	69,327,000	61,694,000	36,232,000	21,235,000
December	85,159,000	78,091,000	72,580,000	43,265,000	24,528,000

Visible supply of corn the 1st of each month.

[From the Cincinnati Price Current.]

	1899.	1898.	1897.	1896.	1895.
January	19,126,000	38,421,000	19,852,000	5,817,000	9,630,000
February	27,139,000	40,581,000	21,938,000	11,976,000	12,654,000
March	31,821,000	40,870,000	26,408,000	13,936,000	12,969,000
April	32,737,000	42,647,000	25,152,000	16,366,000	13,407,000
May	25,811,000	27,044,000	16,997,000	11,319,000	11,107,000
June	13,730,000	20,115,000	12,494,000	8,905,000	10,763,000
July	13,870,000	22,575,000	16,913,000	8,760,000	9,060,000
August	11,646,000	17,575,000	15,677,000	10,752,000	5,207,000
September	6,738,000	16,530,000	27,873,000	13,964,000	5,407,000
October	12,490,000	21,406,000	37,048,000	13,218,000	5,451,000
November	13,716,000	24,574,000	45,958,000	19,340,000	4,805,000
December	11,512,000	22,263,000	42,058,000	18,228,000	5,517,000
	1894.	1893.	1892.	1891.	1890.
January	8,322,000	11,454,000	7,081,000	2,568,000	8,097,000
February	14,406,000	12,534,000	7,386,000	2,610,000	11,919,000
March	18,172,000	15,093,000	10,385,000	2,767,000	14,415,000
April	18,538,000	15,315,000	11,508,000	2,988,000	20,201,000
May	13,114,000	11,539,000	5,956,000	3,125,000	14,335,000
June	7,495,000	5,627,000	3,724,000	5,153,000	12,685,000
July	6,441,000	8,075,000	7,844,000	3,850,000	11,822,000
August	3,973,000	8,020,000	7,004,000	3,874,000	12,049,000
September	3,151,000	5,646,000	8,471,000	5,611,000	9,284,000
October	4,305,000	8,071,000	10,945,000	8,887,000	8,640,000
November	2,759,000	9,174,000	13,290,000	2,972,000	7,017,000
December	4,866,000	7,104,000	10,720,000	2,626,000	3,144,000

We notice that though the corn crop is five times the wheat crop in amount, the visible supply of wheat is five times as large as that of corn (December, 1899).

4. THE CAUSES OF THE VISIBLE SUPPLIES OF GRAIN.

(1) One main cause of the existence of these visible supplies is the competition among primary markets for grain throughout the productive areas. This factor brings out of the producer's hands a large portion of his surplus grain soon after harvest and throws it upon the markets in the form of a visible supply, where it tends to remain throughout the greater portion of the year as a surplus stock in such quantities as to lower the level of prices to a far greater extent than necessary for demands of consumption. This is especially true of the wheat trade. Corn and the other cereals have quite different economic functions, as was indicated above.

(2) The primary cause is the fact that the production of grain is for commercial purposes, and the producers are not in a condition to carry their grain for any length of time after harvest, even if it could be profitably done.

(3) A favoring condition to the existence of a visible supply is the provision of ample elevator facilities at terminal markets. In Argentina and Russia the visible supply often rots by the roadside for want of such facilities, and this is a loss to producer, consumer, and distributer.

(4) A fourth cause of the visible supply is the existence of a specially capable class of speculators who have enough capital and commercial capacity to handle the reserve supply better than anybody else has done.

5. EFFECT OF VISIBLE SUPPLY ON PRICES TO CONSUMERS.

The relation of receipts and exports to the visible supply is illustrated by the following figures showing the weekly movement of wheat:

Weekly wheat movement, 1899–1900.

Weekly receipts at primary centers in the West.				Weekly exports of flour and wheat.		Surplus stock of commercial wheat.	
Date.	Winter.	Spring.	Total.	Date.	Quantity.	Date.	Quantity.
1899.	*Bushels.*	*Bushels.*	*Bushels.*	1899.	*Bushels.*	1899.	*Bushels.*
Jan. 30	966,000	3,291,000	4,257,000	Feb. 2	6,585,000	Feb. 4	28,981,000
Feb. 6	928,000	3,102,000	4,030,000	Feb. 9	5,780,000	Feb. 11	30,161,000
Feb. 13	690,000	2,585,000	3,275,000	Feb. 16	2,455,000	Feb. 18	29,618,000
Feb. 20	579,000	2,205,000	2,784,000	Feb. 23	3,841,000	Feb. 25	29,920,000
Feb. 27	670,000	2,732,000	3,402,000	Mar. 2	5,815,000	Mar. 4	29,477,000
Mar. 6	783,000	2,537,000	3,320,000	Mar. 9	4,399,000	Mar. 11	29,799,000
Mar. 13	714,000	3,354,000	4,068,000	Mar. 16	4,114,000	Mar. 18	29,992,000
Mar. 20	485,000	2,702,000	3,187,000	Mar. 23	3,747,000	Mar. 25	30,067,000
Mar. 27	334,000	2,402,000	2,736,000	Mar. 30	3,988,000	Apr. 1	29,985,000
Apr. 3	317,000	2,485,000	2,802,000	Apr. 6	3,385,000	Apr. 8	30,413,000
Apr. 10	430,000	3,381,000	3,811,000	Apr. 13	1,984,000	Apr. 15	30,502,000
Apr. 17	388,000	1,676,000	2,064,000	Apr. 20	2,933,000	Apr. 22	29,179,000
Apr. 24	318,000	1,460,000	1,778,000	Apr. 27	3,028,000	Apr. 29	28,144,000
May 1	475,000	2,098,000	2,573,000	May 4	3,484,000	May 6	27,466,000
May 8	470,000	1,895,000	2,365,000	May 11	3,284,000	May 13	26,028,000
May 15	533,000	1,509,000	2,042,000	May 18	2,212,000	May 20	25,468,000
May 22	485,000	1,511,000	1,996,000	May 25	3,198,000	May 27	24,192,000
May 29	674,000	2,379,000	3,053,000	June 1	3,596,000	June 3	26,185,000
June 5	852,000	3,520,000	4,372,000	June 8	3,158,000	June 10	27,601,000
June 12	1,070,000	4,175,000	5,245,000	June 15	2,799,000	June 17	27,923,000
June 19	894,000	4,325,000	5,219,000	June 22	3,747,000	June 24	28,843,000
June 26	1,289,000	4,477,000	5,766,000	June 29	3,269,000	July 1	33,587,000
July 3	1,195,000	4,427,000	5,622,000	July 6	3,759,000	July 8	34,008,000
July 10	953,000	3,096,000	4,049,000	July 13	3,264,000	July 15	34,552,000
July 17	1,648,000	3,333,000	4,981,000	July 20	3,408,000	July 22	36,013,000
July 24	2,206,000	3,613,000	5,819,000	July 27	3,366,000	July 29	36,019,000
July 31	2,248,000	2,579,000	4,827,000	Aug. 3	4,712,000	Aug. 5	37,166,000
Aug. 7	2,476,000	2,178,000	4,654,000	Aug. 10	3,616,000	Aug. 12	36,306,000
Aug. 14	2,225,000	1,502,000	3,727,000	Aug. 17	4,040,000	Aug. 19	36,207,000
Aug. 21	1,764,000	1,528,000	3,293,000	Aug. 24	3,344,000	Aug. 26	34,690,000
Aug. 28	1,840,000	1,729,000	3,569,000	Aug. 31	3,613,000	Sept. 2	34,768,000
Sept. 4	1,819,000	2,591,000	4,410,000	Sept. 7	4,354,000	Sept. 9	36,111,000
Sept. 11	1,688,000	4,425,000	6,113,000	Sept. 14	4,536,000	Sept. 16	39,288,000
Sept. 18	1,309,000	6,561,000	7,870,000	Sept. 21	4,631,000	Sept. 23	39,728,000
Sept. 25	1,005,000	6,929,000	7,934,000	Sept. 28	3,872,000	Sept. 30	42,143,000
Oct. 2	1,020,000	6,309,000	7,329,000	Oct. 5	5,183,000	Oct. 7	44,335,000
Oct. 9	1,172,000	6,589,000	7,761,000	Oct. 12	5,265,000	Oct. 14	47,314,000
Oct. 16	1,421,000	6,670,000	8,091,000	Oct. 19	4,161,000	Oct. 21	48,855,000
Oct. 23	1,254,000	6,151,000	7,405,000	Oct. 26	4,416,000	Oct. 28	49,561,000
Oct. 30	997,000	5,588,000	6,585,000	Nov. 2	3,047,000	Nov. 4	51,001,000
Nov. 6	629,000	5,431,000	6,060,000	Nov. 9	4,651,000	Nov. 11	52,562,000
Nov. 13	561,000	5,481,000	6,042,000	Nov. 16	4,540,000	Nov. 18	54,001,000
Nov. 20	453,000	5,220,000	5,673,000	Nov. 23	3,689,000	Nov. 25	55,936,000
Nov. 27	403,000	4,725,000	5,128,000	Nov. 30	3,699,000	Dec. 2	55,758,000

Weekly wheat movement, 1899–1900—Continued.

Weekly receipts at primary centers in the West.				Weekly exports of flour and wheat.		Surplus stock of commercial wheat.	
Date.	Winter.	Spring.	Total.	Date.	Quantity.	Date.	Quantity.
1899.	*Bushels.*	*Bushels.*	*Bushels.*	1899.	*Bushels.*	1899.	*Bushels.*
Dec. 4	291,000	6,010,000	6,301,000	Dec. 7	5,133,000	Dec. 9	56,292,000
Dec. 11	345,000	4,033,000	4,378,000	Dec. 14	3,259,000	Dec. 16	57,153,000
Dec. 18	415,000	3,082,000	3,497,000	Dec. 21	2,813,000	Dec. 23	58,878,000
Dec. 25	337,000	2,949,000	3,286,000	Dec. 28	3,610,000	Dec. 30	58,291,000
1900.				1900.		1900.	
Jan. 1	343,000	2,712,000	3,055,000	Jan. 4	2,510,000	Jan. 6	57,892,000
Jan. 8	277,000	2,336,000	2,613,000	Jan. 11	4,249,000	Jan. 13	56,533,000
Jan. 15	341,000	2,895,000	3,236,000	Jan. 18	3,061,000	Jan. 20	56,536,000
Jan. 22	318,000	2,301,000	2,619,000	Jan. 26	3,581,000	Jan. 27	55,597,000
Jan. 29	289,000	1,964,000	2,253,000				

A comparison of the weekly exports with the surplus stock and the weekly receipts shows that the receipts generally exceed exports to such an extent as to keep the wheat stocks in a state of a permanent reserve, as shown in the column of surplus stocks. The effect of this upon the price to consumers is to give stability to the level of wheat prices throughout the year. In other words, it is a preventive of speculative panics which irregularity in visible supply would certainly occasion.

Not only is the total commercial supply then made known throughout the trade world, but the supply is located, so that a grain ship arriving at our seaboard for a cargo can in an hour's time ascertain just where it can get a cargo and how long it will take to bring it from the primary markets to the ship's side. It is this fact of a visible supply of surplus grain awaiting the bid of the buyer to move quickly in any direction that sets the world at rest over its daily bread. "It is satisfied to know that it exists somewhere, knowing that it can be obtained from any quarter of the world when required."[1] The consuming world knows pretty well months in advance about what it has to get along with until the next harvest; and knowing the state of its surplus supply, week by week and month by month, it draws upon its stock just about as fast as its daily needs require. Any tendency to draw too fast is checked by a rise in price, and tendency to consume too slowly is stimulated by a fall in price through the fear of loss by holding it back in the face of a falling level of prices. Modern facilities for anticipation of supply and demand, together with agencies for transportation, put the consumer in such relation to the visible supply as to reduce to a minimum the element of uncertainty in the regularity of his supply of subsistence.

6. FURTHER EFFECTS ON CONSUMER AND DISTRIBUTERS.

What bearing has this fact upon the economic position of consumers? The existence of a visible supply, in the first place, has the effect of releasing the entire grain-consuming millions from anxiety for future subsistence, and therefore adds immensely to the sum total of economic energies available for other kinds of enterprise, in which, presumably, these millions are industrially more efficient. This should increase the consumer's purchasing power, and so enhance grain values. But apart from these very general considerations the consumer's position is radically affected by the existence of a visible supply. The supply of grain being thus universally known to consumers, or their representatives in trade, which means much the same thing, the consumer is thereby put in a position to set the final value upon the product, which the producer has already thrown upon the market, and the distributer is bound to get rid of at the risk of heavy loss from depreciation and delay as the next harvest approaches. Otherwise he may lose profits and capital alike. The distributer's position in connection with the visible supply, now in his hands, is rendered still more hazardous by reason of the fact that the competing grain countries in the Southern Hemisphere harvest their crops about halfway between the end of one and the beginning of another North American harvest. This is still another factor in favor of the consumer as a determinant of the final value of our visible supply. Australia, India, and especially Argentina are notorious disturbers of prices of wheat. It does not alter the situation to say that the harvest of the Southern Hemisphere is uncertain. They are none the less a forceful factor in the consumer's favor; because, with good harvests there, the influence of our own visible supply on the price the consumer pays is intensified, while with bad harvests the pressure of our visible supply on the consumer's level of prices is only slightly mitigated. The point is that, knowing the visible supply in advance, the price to consumers will adjust itself accordingly almost as far in advance of consumption as the appearance of the visible supply is in advance of its final distribution. Meanwhile the price level sags. If there is a marked and prolonged rise in cereal values, the substitution of another food will at once be prepared for among consumers; when there is a fall, the resumption of cereal consumption will occur with the corresponding vigor. In either case the elasticity in the demand of the consuming world holds the key to the level of cereal prices as long as a relatively large visible supply loads down the market. As long as the visible supply holds its present position in the distributive system, the estimate of the consumer will be the decisive factor in giving final value to our surplus cereals. Out of the value to consumers must come the expenses of distribution and the price paid the producer.

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[1] Transactions of the California State Agricultural Society, 1899, p. 5.

Our analysis indicates that one main cause for depression in the price of cereals to producers is the method of handling the surplus crops. The influence of this visible supply upon the course of farm prices throughout the first 6 months or 9 months of the year is to keep them down to a dead level. For the months during which the primary markets and the railroads are in the field competing for the surplus, prices are somewhat more favorable. This competition sustains prices in spite of the new harvest, and draws the bulk of the wheat from the farmer's hands, usually by the end of the year.

The months during which the visible supplies are accumulated are September, October, and November for the winter wheat centers, and August, September, and October for the spring wheat centers. The course of daily prices shows that during these months the cash price often rules higher than the future price for January or May wheat. This anomalous fact requires explanation, because the price rules higher in the months of relative plenty than in the months of relative scarcity. The only adequate explanation is to be found in the competition of carriers and central markets for the surplus stock, in view of the fact that if one railroad or market did not get the traffic early in the season, the others would.

The fact that farmers have no facilities for holding grain is only a condition favoring this early accumulation of surplus supply, but not the cause of its existence. The cause lies in the competitive relations between markets and their respective lines of railways, whose financial success depends largely on hauling and handling grain.

There is no single factor in the commercial system of cereal distribution in the United States that compares with the visible supply in the importance of its bearing upon the level of prices at which grain passes from producer to consumer.

7. THE COMMERCIAL DISTRIBUTION OF THE VISIBLE SUPPLY.

The second commercial step in handling the grain crop is that of internal and foreign distribution of such portions of the visible supply as are not ground at primary markets. The following table shows how large an annual deduction of wheat ground into flour is to be made before the distribution from primary markets to centers of consumption actually begins:

Amount of flour manufactured at various cities.

[Reports of St. Louis Merchants' Exchange.]

	1895.	1896.	1897.	1898.	1898.
	Barrels.	*Barrels.*	*Barrels.*	*Barrels.*	*Bushels.*[1]
Minneapolis	10,581,635	12,874,890	13,625,205	14,232,595	61,046,677.5
St. Louis	1,740,026	1,333,986	1,080,916	1,054,875	4,746,937.5
Baltimore	401,580	419,234	368,091	392,180	1,764,810
Philadelphia	210,000	240,000	240,000	400,000	1,800,000
Milwaukee	1,769,725	1,620,140	1,753,023	1,741,347	7,836,061.5
Buffalo and vicinity	1,335,000	1,225,000	1,097,883	859,897	3,863,536.5
Toledo	900,000	900,000	900,000	1,144,000	5,148,000
Detroit	320,000	305,000	331,000	532,000	2,394,000
Chicago	751,501	921,835	1,188,126	1,037,442	4,668,483
Duluth and Superior	3,534,093	3,120,945	2,532,830		
Kansas City	342,517	526,183	703,978	1,102,000	4,959,000
Peoria	123,200	103,300	95,000	115,000	517,500
Cincinnati	269,839	146,389	278,718	361,542	1,626,939
Cleveland	378,000	350,453	368,028	170,100	765,000
Indianapolis	544,801	431,502	363,484	580,674	2,613,000
Louisville				545,000	2,450,000

[1] One barrel equals 4.5 bushels.

It is probably not an overestimate to put at 150,000,000 bushels the amount of wheat that is ground into flour in the interior of the country without ever reaching the seaboard.

Comparing the movement of grain from the primary markets with that from the farm to the primary markets, we notice a new factor of great importance in the expense of distribution. In the westward movement the accumulation of the surplus crop was affected only slightly by water transportation. In the distributive movement, on the other hand, water transportation is a determining factor. The trunk-line movement eastward from the interior is determined largely by its capacity to compete with lake and canal carriage. Likewise the southward movement of grain to the Gulf ports is determined by the river rate to New Orleans. Between these two waterways run fully a dozen lines of grain carriers to the seaboard. The charges they collect can never be much higher than the water rates with which they must compete during the season of the year when navigation is practically suspended. Even though no grain is carried during the closed season, or even if little grain goes to New Orleans by river, there is still a potential competition which railway rate makers respect as much as any actual competition.

The competition of water and rail transportation has resulted in a downward tendency of grain rates to the seaboard in all directions from the interior. In 1864 the published all-rail rates for grain from Chicago to New York were $1 per hundred. In 1884, at the nearest corresponding date, it was 15 cents per hundred. In 1894 the average all-rail rate was 20¼ cents per hundred. In 1898 it was 19¼ cents per hundred.[1]

These rates have varied, but fluctuations are largely due to the fact that the competition of railroads among themselves frequently forced rates below the level at which lake and canal competition required them to carry grain. Trunk-line rates are, therefore, subject to influences which are not born of far-sighted policy in management.

The railway practice of charging a lower rate on grain destined for export than for consumption between the primary markets and the seaboard has certain definite effects on prices. Every train load that moves to the seaboard for export at a lower than the domestic rate helps thereby to sustain the price of the domestic supply, and consequently every failure to move the surplus wheat adds to the weight that depresses the home market price to a point at which wheat becomes more profitable for fattening live stock on the farm than for shipping to Europe. This coincidence of a heavy North American surplus and a heavy South American surplus may occur twice in ten years or oftener, and the discriminating rate on export grain is the way the railroads assist in relieving the strain on the price level at home when such a situation is threatening; but if this occasional expedient for meeting a crisis in the world's wheat market becomes a chronic practice in distribution it is bound to react seriously upon the consumer and producer of wheat at home.

One of the first effects of a permanent policy of this nature is to reduce the value of our cereal exports by substituting the raw material (wheat) for the manufactured product (flour). The flour industry will tend more and more to be confined to producing the home consumption, because domestic rates on wheat and flour north of the Ohio and east of the Mississippi are the same.

Another effect of this policy must be reckoned with, namely, the redistribution of the milling industry itself by this discriminating rate against seaboard cities in favor of inland centers of consumption. The effect will be to discourage the location of milling industries at seaport towns especially, if not to decentralize the milling industry generally by locating in each interior center of consumption of considerable size a mill of the capacity required by that community, for the local demand for the by-product, which the progress of dairying calls for, may more than make a satisfactory profit on the investment.

8. THE NET RESULT OF TRUNK-LINE COMPETITION.

The history of the distribution of the surplus grain from the interior markets at which it has been accumulated to the centers of consumption eastward and southward is summed up in one word—competition. During the past century the main lines of distribution have shifted several times. First, the grain went south by way of the Ohio and the Mississippi rivers, from Cincinnati and St. Louis to New Orleans, thence to the east by coastwise ships; secondly, the opening of the Erie Canal (1825) turned the cereal movement eastward to New York; thirdly, the railroads and the lakes competed for the grain traffic (1860-1870); fourthly, the railroads and the Erie Canal kept up a competitive struggle for 10 years, and, fifthly, the rise of the Southern movement of grain traffic by rail to the Gulf became a permanent factor again.[1]

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[1] New York Produce Exchange, p. 72.

As matters stand now the railroads have demonstrated their capacity to compete with lake, river, and canal in the present state of water methods of transportation of grain to the seaboard. The railroads are therefore substantially in control of this movement, and are likely to remain in control until more economical methods of carrying grain by water are substituted for the methods now in use, especially for handling the canal and river portions of this traffic.

How completely the railroads are in control is possibly not fully realized by public men or private interests. The receipts of wheat and rye at New Orleans in 1898 by rail were over four times the amount received by water. At New York 83 per cent of the grain receipts came by rail.

The average rate on a bushel of wheat by lake and canal from Chicago to New York compared with the lake and rail rate was but a half a cent in favor of the all-water route in 1898 and 1 cent in 1899.

The internal distribution of cereals is an Eastern and Southern movement from the interior centers of primary supply. The rate of the movement depends on several factors. The demands of domestic consumption constitute the first factor in importance; secondly, the requirements of the export trade. Much of the cereal surplus reaching primary markets in the interior, however, is consumed there, and never enters into the distributive movement as cereals again. The concentration of the brewing and malting business closer to the Western sources of supply has, for example, greatly reduced the eastward movement of barley. The malting "trust's" policy thus affects distribution. The ascendancy of milling interests at primary markets likewise reduces the volume of internal distribution of grain. Minneapolis grinds 65,000,000 bushels of wheat annually. The growth of stock-feeding interests in Texas has so stimulated the local production of corn as to close to Kansas a once important Southern market. Such changes are constantly taking place which change the volume, the course, and the character of the cereal movement.

The center of the competition among the railroads and between the railroads and the lake and canal route for the eastward grain trade has, during nearly the whole period of the past 50 years or more, been Chicago. The present status of the movement from Chicago is given in the following extract:

DIRECTION OF GRAIN SHIPMENTS FROM AND SOURCE OF GRAIN RECEIPTS AT CHICAGO.[2]

Of the total grain and flour shipments from Chicago, the following proportion goes by lake: Fourteen per cent of the flour, 70 per cent of the wheat, 75 per cent of the corn, 33 per cent of the oats, 82 per cent of the rye, and 41 per cent of the barley. By far the largest part of all lake shipments of grain and flour from Chicago goes to Buffalo, but Erie, Ogdensburg, Depot Harbor, and Parry Sound also receive large amounts. The shipments by canal are inconsiderable, forming only about one five-hundredth of the total grain shipped. The railroads participating most generally in the grain and flour shipments from Chicago are the great east-bound lines—the Michigan Central, the Lake Shore and Michigan Southern, the Pittsburg, Fort Wayne and Chicago, the Pittsburg, Cincinnati, Chicago and St. Louis, the Baltimore and Ohio, the Chicago and Grand Trunk, and the Chicago and Erie.

The following table shows the entire movement of grain and flour from Chicago during the year 1898 (shipments from Milwaukee through Chicago not included):

Shipments of flour and grain from Chicago, by routes, in 1898.

[Chicago Board of Trade report.]

	Flour.	Wheat.	Corn.	Oats.	Rye.	Barley.
	Barrels.	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*
Lake—To Buffalo	553,729	22,732,030	57,632,854	22,769,771	2,391,005	2,697,543
To Erie	102,671	277,960	7,155,672	191,470	606,964	....
To Ogdensburg	5,953	108,000	5,129,585	816,145	....	....
To Port Huron	....	....	2,265,670	524,125	....	....
To other United States ports	38,296	1,054,146	4,048,512	480,550	275,600	....
To Kingston	3	758,482	4,258,091	180,150	124,650	....
To Depot Harbor and Parry Sound	12,984	811,550	6,646,312	96,375	64,830	....

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[1] Monthly Summary, U. S. Treasury Bureau of Statistics, January, 1900: "The grain trade of the United States."

[2] From the Treasury Bureau of Statistics.

Shipments of flour and grain from Chicago, by routes, in 1898—Continued.

	Flour.	Wheat.	Corn.	Oats.	Rye.	Barley.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*
Lake—To Prescott	....	406,077	3,946,661	....	204,610	117,500
To Midland	....	312,018	3,516,310	....		
To Sarnia	....	....	247,214	2,961,031	....	....
To Owen Sound	....	134,000	1,892,858	....	....	....
To other Canadian ports	....	....	427,205	....	....	....
Total by lake	713,633	26,594,263	97,166,944	28,019,617	3,667,659	2,815,043
Canal	....	618,182	13,000	6,800		
Chicago and Northwestern Rwy	56,857	131,578	314,580	46,106	650	53,991
Illinois Central R. R	28,200	19,600	3,250	11,000	....	3,250
Chicago, Rock Island and Pacific Rwy	29,219	55,850	167,800	556,900	1,940	60,750
Chicago, Burlington and Quincy R. R	48,935	96,780	30,280	3,000	3,750	....
Chicago and Alton R. R	50,450	200,950	....	1,025	....	....
Chicago and Eastern Illinois R. R	58,565	14,850	600	10,980	4,825	27,885
Chicago, Milwaukee and St. Paul Rwy	3,600	161,040	352,200	5,500	620	4,500
Wabash R. R	106,800	820,839	2,835,118	4,423,571	20,720	30,384
Chicago Great Western Rwy	....	3,836	....	....	....	....
Cleveland, Cincinnati, Chicago and St. Louis Rwy	59,900	1,431,704	435,050	691,950	17,235	409,200
Chicago, Indianapolis and Louisville Rwy	83,490	6,473	1,543	24,944	12,831	103,075
Michigan Central R. R	449,075	312,943	1,484,540	8,406,433	128	181,983
Lake Shore and Michigan Southern Rwy	511,991	3,335,475	5,138,599	8,270,535	61,319	679,210
Pittsburg, Fort Wayne and Chicago Rwy	950,023	409,886	5,430,192	6,703,129	284,755	612,658
Pittsburg, Cincinnati, Chicago and St. Louis Rwy	369,063	373,885	3,363,458	2,717,745	166,858	574,353
Baltimore and Ohio R. R	354,427	888,333	4,507,461	2,642,649	82,497	91,818
Chicago and Grand Trunk Rwy	185,142	1,234,895	2,718,825	3,637,337	41,001	96,847
New York, Chicago and St. Louis Rwy	554,028	832,986	1,269,365	8,558,013	447	279,890
Chicago and Erie R. R	418,838	547,546	5,164,876	10,320,402	85,819	427,410
Total shipments	5,032,236	38,094,894	130,397,681	85,057,636	4,453,384	6,755,247
In store and afloat in harbor December 31, 1898	40,000	3,611,744	5,882,115	1,419,771	434,766	534,216
City consumption and unaccounted for	1,323,201	5,172,628	9,467,205	25,058,804	646,546	11,733,494
Grand total	6,395,437	46,879,266	145,747,001	111,536,211	5,534,696	19,022,957

The competition among railroads as grain carriers to the seaboard has no doubt often been responsible for the transportation of grain below the actual cost of the service. To that extent trunk-line policy has been one of injury to the distributive system. This has tended more than anything else to hinder the development of lake transportation as a factor in the distribution of farm products. There are even those who hold that the day of water transportation in competition with railroads is passed. Such a conclusion is, however, based upon interest rather than investigation. The lake and river transportation agencies, like all other commercial agencies, have periods of decline and periods of development. Just at the present time the old order of water transportation by river and canal is beginning to pass away. These channels are still to some extent actual competitors, but to a very much greater extent potential competitors, of their rivals, the railroads. The rise in railroad rates from St. Louis, for example, on grain for Gulf or Atlantic ports immediately calls into existence new organizations of capital for the utilization of the Mississippi by improved barges. By increase in the amount carried on each barge a reduction in the cost of carriage per unit of grain could be made here as it has been upon the lakes, and as it is most likely to be made in the case of the Erie Canal. At present, therefore, those who count upon the elimination of water transportation in getting our grain to the seaboard have really very little ground on which to build their hopes.

The policy of other nations, as well as of our own, demonstrates the advisability of utilizing the natural facilities of transportation in the interest of agriculture if for no other.

Besides the competition of railroads with waterways in the distribution of grain and the competition of railroads with one another, a third factor of equal importance enters into this movement—that is, the competition of the seaboard cities for the control of the cereal movement. If no other influence could be relied upon for the development of water transportation, this influence alone would no doubt prove equal to the project. In fact, the commercial cities are fully aware of the value to themselves of a double system of distribution. They were the original promoters of canals in competition with turnpikes to reach the interior, and it is not to be feared that the great commercial cities of the East and those located on the lakes or on the Mississippi will fail to develop the natural and artificial waterways so far as their own interests are involved therein.

Such seems to be the state of the question as far as it concerns the grain movement to the seaboard cities of the United States.

From the standpoint of the interior cities, competition is quite as keen as it is among the seaboard cities in the distribution of grain. Chicago competes with St. Louis and Kansas City and Milwaukee in Indiana, Ohio, Michigan, Pennsylvania, New York, New Jersey, and New England. Kentucky draws supplies from St. Louis when not enough is produced within the State. A good portion of the time Indiana, Ohio, Michigan, Pennsylvania, and West Virginia raise wheat enough to take care of themselves and usually have a surplus to dispose of, which is placed in some neighboring State in competition with St. Louis or Chicago or exported.

Chicago can export grain via the lakes to Montreal and rail routes to Montreal; also can export by rail either to Newport News, Baltimore, Philadelphia, New York City, Boston, or Portland. St. Louis has equal advantages with Chicago, except that St. Louis lacks the advantages of the Great Lakes; or, on the other hand, St. Louis has the advantage of the Mississippi River to New Orleans, also rail routes to New Orleans and Pensacola.

Kansas City can place grain straight through to all Eastern ports or for export via Atlantic seaboard ports; also can work direct with Gulf ports, which is the way the bulk of Kansas City grain is placed, going from that city to Galveston, Port Arthur, and New Orleans.

Duluth, Minneapolis, Ashland, Green Bay, Manitowoc, and Milwaukee all have equal advantages with Chicago.

It seems clear, then, that the existing system of distribution of the visible supply of grain involves three main commercial interests: First, that of the grain-carrying transportation lines; secondly, that of the competitive interior markets at which the movement begins; and, thirdly, that of the seaboard cities at which internal distribution ends. All of these interests act and react one upon another, and the existing system has been wrought out under the impact of their powerful influences; but the net gain from trunk-line competition has to be credited primarily to the consumer, not to the producer.

9. THE FUNCTION OF "FUTURE" SALES IN MARKETING WHEAT.[1]

In the investigation by the Hatch committee of the question of speculative grain dealing in 1892, the following testimony was given:

"All I shall attempt to do is to come before you and ask you to go with me from the time we send our money into the country to buy this wheat—because I deal in nothing except wheat—then we will go right along to Duluth and Minneapolis, over to New York and Montreal and through to the foreign market, and I will try to explain to you how this business is handled, the amount of capital it takes to handle it, the way in which it is handled, and the probable quantities that are taken for consumption while the property is moving, both here and in Europe (that is, so far as our crops are concerned), and then try to distinguish or designate the amount that is sold from these deliveries for actual consumption and the quantity which is left on our hands, which we provide for by selling to the gamblers. That is about all I wish to explain to you, and I shall make no attack upon the bill at all. I simply ask you before you tear down this method of handling this grain to provide some way, some substitute, by which we can better handle it and give the farmers more money for it.

"Now, in the first place, when the crop is ready to move—our season is about the 1st of September or the last days of August—we begin to send out our money—I am speaking of elevator people now—to our country elevators. We live, as you know, in the extreme Northwest, on the line of the Northern Pacific and the great Northern and the Milwaukee and St. Paul and all Northern roads that affect the three States of Minnesota, North and South Dakota. We produce 150,000,000 bushels of spring wheat, the bulk of which has to be handled in 3 or 4 months; that is, the surplus over and above the seed, etc., for the States. Now, for instance, in my own business, I can better demonstrate it, because I am probably as large a handler as anyone in the Northwest. I furnish money for at least 175 country elevators. They are scattered all over these three States. But before I enter into this statement here I wish to say in my remarks, if any gentleman on this committee, or any gentleman outside of this committee, should want to ask any questions, I wish you would interrupt and stop me and I will answer and clear the way, for there are many things which you may forget, and I may forget to explain at this time, and I wish to explain everything from beginning to end as it actually exists, so you will not interrupt me at all if any of you gentlemen ask me any questions you may desire.

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[1] From testimony of Mr. A. J. Sawyer, Minneapolis, Minn., before Hatch Committee on Agriculture, February 2-18, 1892, pages 29-33.

"Now, we commence there and send out, say, for instance, $500 to $1,000 to an elevator; we can not start on much less than that. That will absorb in my case the first day $100,000 to $150,000. In that part of the country our farmers thrash from the shock. They do not thrash their grain from the stack as people do in the older States of Kansas and Nebraska. When you get into the Northern wheat country you find that they thrash from the shock. We have our elevators so arranged we do not have to sack this wheat, but we have a box arranged that holds 100 bushels, and a wagon pulled by four horses hauls this wheat to the elevators and they drive upon what is called a dump, which is a platform, and when they get that wagon on the platform they touch a lever there and down goes that end of the wagon and they draw up the slide and the wheat drops into the pit. When the wagon goes up, the wagon, wheat, and all are weighed. When the wagon is emptied it is weighed again and the net difference is given over to the farmer and he goes to the elevator and gets his money. Now, our elevators are so constructed that I have actually handled in some of these elevators 1,000 bushels in an hour, sometimes making 10,000 bushels in a day. We are compelled by the railroad company, on whose land our elevators are placed and which we are under contract to protect, to keep our money there and buy this product as it is delivered, and I might say the railroad practically fixes our margin in which we buy. But we can not get our cars in to ship the first day and we will perhaps have 50,000 or 100,000 bushels, because these large farmers there will thrash 2,000 or 3,000 bushels a day.

"Now, we have a kind of paymasters through the merchants in the towns in which our elevators are located, and they telegraph at night the quantity of wheat received, and if they do not telegraph they write us so we will get the mail early in the morning. We know what the receipts are and what they are apt to be the next day, and we provide the requisite amount of money for the next day. For instance, if the weather is good we increase the amount of money we send into the country. Now, we order cars there immediately, and they are loaded in carload lots—of course we must have carloads of the same class, as we can not mix two grades of wheat—and we begin to ship at once to the highest market. As soon as we get a carload of wheat it is ready to go, but it must be all of one grade, so that necessarily we have a quantity of wheat in our houses which runs up pretty well before we can ship all these different grades. Remember, this money must keep going into the country every day right along. There is no cessation. It must be going there, and we have to borrow this money, a great deal of it. None of us are rich enough to handle wheat in these quantities without borrowing money.

"Then, when the wheat commences to move, it probably takes 2 days to get to Duluth, so, as a matter of fact, we have got 5 or 6 days' receipts on our hands before we begin to realize anything. When we get this wheat to market, either Duluth or Minneapolis—if it goes to Duluth we wire Buffalo—all shippers have agents at Buffalo; I have myself a house at Buffalo, and I have a broker in New York, and most all of the shippers have brokers in New York—and we all begin to sell that property as we call it c. f. i. p., which means cost, freight, and insurance paid. We also send out—that is, I do—cables every night to every market in the world that uses this grade of wheat. If the markets are able to take all our grain, we are even with the market. It is not necessary to have the grain there. We know what we have in the houses and that we have a certain number of days to ship this grain. This wheat goes in there, and we make our charter when we sell this grain. If we are able to sell all this grain, there is no trouble with us at all; we can keep right along and be protected; but as the receipts increase and the markets of the world can not take our grain it is impossible to take it at the price we are taking. Now, what are we going to do with it? Now, suppose we are handling 100,000 bushels a day, and we can sell in Minneapolis, Buffalo, Montreal, or New York only 75,000 bushels a day—say that is all we can sell. We have then 25,000 bushels left on our hands which we can not sell, there being no market for it.

"Now, what are we going to do with that wheat? We can not carry this; it is utterly impossible. We have wired the markets of the Old World and can get no response from there. We send them our cable—and I wish to explain that. We send cable at the close of the market at night to our agents, one or two commission merchants there, to whom we quote cables of the price at which we will sell any reasonable amount they may want. They get these cables and try to place that wheat with their millers. While we are asleep here they are working all day trying to see if they can place 8,000 bushels, a boat load—the reason it is given the name of a boat load is because the boats on the Erie Canal carry 8,000 bushels—if they can place one or two or three or four boat loads there, then they wire back to us and accept our offer. This wheat is delivered there free; we pay the charges of delivery in Europe just the same as in New York.

"If we have the wheat on hand we do not buy any option against our sales made over there, because we have to give them all they want; because if we do not they would go to somebody else, because they have placed it. If they have purchased more wheat than we have got on hand, or will, probably, that day, then we have got to step into the market and buy an option against the sale made to them. That keeps the channel of trade open between us and the foreign markets all the time, so we are right in there with them all the time, and we are doing that every day, which gives us a chance to place so much of the product of our country every day. As the trade increases we find the railroad company can not ship our grain. It is not possible for them to ship it. Now, what are we to do in such a case as that? There is only one way to handle it, and that is to sell what the railroad company can not ship to these gamblers.

"Mr. YOUMANS. When you do that, what do you do with that grain?

Mr. SAWYER. We hold the grain right there. I am glad you asked the question. That is the reason I want you gentlemen to ask any questions you think of, because I am prepared to explain this system of handling grain in the Northwest thoroughly; and while I do that I want you people, if there is anything you do not understand, to ask questions in regard to it. I have here a statement of 3 years' receipts in our line of elevators, and that is a fair index of the elevators in the Northwest. In the first week of September, ending September 7, 1889, we received in our line of elevators alone—which is only a small line compared with some of them—108,050 bushels of wheat; we shipped 60,540 bushels of wheat, which left 48,000 bushels we could not ship. It is utterly impossible for two or three reasons. In the first place, because the railroad company could not get the cars to take wheat which was received from the farmers; and in the second place, the different grades of wheat fill up the elevators there for the reason they can not mix these grades.

"The second week in 1890 ran along even with the receipts, nearly—83,350 bushels received and 73,146 shipped, leaving only 10,000 bushels in the elevators altogether. In 1891, which was the last crop and the largest crop we have ever received there, we received 224,300 bushels of wheat and we shipped 149,530 bushels of wheat, leaving, say, 70,000 bushels in the elevators that we were not able to deliver. In other words, we did not have the cash grain ready to deliver. Now, it ran along down in each of these years until December 28. At the expiration of December 28, 1889, we had 997,770 bushels in that line of elevators alone which it was utterly impossible to ship on account of lake navigation being closed. We had been buying this wheat right along on the basis of lake navigation up to November 15, and we had been paying these high prices.

"Mr. YOUMANS. Then the sale of these options would be the only way that would help you out in this business under that condition of things?

"Mr. SAWYER. We would close the elevators but for that fact. We are taking this risk of carrying this wheat in our elevators from the time we receive it. It will increase until we can ship it, which will be not until next May, June, or July.

"Now, some of you might ask, How do you protect yourself in that way? I will tell you how we do that. We sell this wheat—say September or October wheat—for December delivery, and we usually get 2 or 3 cents difference, which enables us to pay interest and insurance. If we sell the wheat and get a premium over cash wheat to cover our interest and insurance, you see very plainly we lose nothing; all we have got to do is to provide the money. Now, when it comes to December—there is always a carrying charge from December to May—when it comes to December we turn that wheat into May wheat, and consequently that wheat is sold and the interest and insurance is paid. The speculator pays our carrying charge, so that we do not lose any money from the fact of not being able to ship that wheat and press it upon the market and force the market by an actual sale. That is the way we are enabled to carry the wheat in the elevator.

"Mr. MOSES. If a method could be devised by which these farmers could hold the wheat and sell it as the world needs it, would it not obviate the necessity of the existence of these gamblers?

"Mr. SAWYER. They would be the gamblers themselves, because he is virtually buying his own crop and taking his own chances instead of putting it on the market and letting the gambler take the chances and protect himself. The farmer becomes the gambler instead of the producer.

"Mr. MOSES. My idea was to let the farmers sell as the world wants it.

"Mr. SAWYER. That is one side of it. The other side is there is a lot of small bulls all over the country, which are too numerous to mention, who are willing to take that wheat.

"Mr. MOSES. As a matter of fact, the farmer must sell it at once?

"Mr. SAWYER. He does sell it.

"Mr. MOSES. He is compelled and forced into the market and has to take what he can get.

"Mr. SAWYER. I do not know whether he is or not.

"Mr. MOSES. Yes, sir; I think the farmer is.

"Mr. SAWYER. I would not want to admit that every farmer is compelled to sell it, for the reason that the richest and largest farmers sell their wheat just as soon as they thrash it. I have a fair-sized farm myself of some 4,000 or 5,000 acres, and my son is on that farm. I have only one child in the world and I have placed him on the farm for the reason I believe farming is a pretty good business. My farm is a small farm as compared with some, but every one of the large farmers sells his wheat right from the machines because it costs less to handle and is less risk. You put wheat in a granary in the country and there are very few who have the facilities to take care of it, and there are very few who know how to take care of it. If by any chance the roof should leak or anything of that kind, the wheat would heat. It must be thoroughly dried before it goes into the farmer's bin or it will heat. It heats in some of these terminal elevators, and they have to keep handling it over and over again all the time; if not, it will heat and sour and finally have to be sold as rejected wheat. So it is a very serious question whether the farmer would make money by holding this wheat or not. I do not think so; if I did I would not sell mine as I do right from the machine."

There are three ways of escape from the system of throwing large supplies of grain on the market at the time of harvest. One is by providing granary facilities on the farm. Another is by developing mixed farming, by which the grain output of the farm is reduced and capital and labor put to other uses on land. The third is to develop the local consumption of grain by milling or other means.

10. GRANARY FACILITIES ON THE FARM.

In the effort to find out to what extent grain growers were in a position to keep their grain for future sale after thrashing, a circular letter was sent out to the heads of the agricultural departments of the various States. The reply from Ohio estimates that perhaps 33 per cent of the grain grown in Ohio is sold from the thrasher, and that of the balance about 80 per cent is stored in granaries on farms and 20 per cent in warehouses for a more favorable turn in price. In Nebraska the prevailing custom is for the producer to provide his own grain facilities. In Texas as a general thing the farmers are provided with sufficient barn capacity to store their entire crop. In Michigan the grain growers, with few exceptions, have granary accommodations of sufficient capacity for the grain held over. Most of those who have such facilities and those who have not sell wheat from the machine. Here, as elsewhere where mixed farming is practiced, granary space is part of the grower's equipment to take advantage of a future rise in price. In Pennsylvania, the farm buildings provide enough granary space to store the entire crop, under mixed farming. Mixed farming requires the farmer to "feed out" upon the farm a large proportion of his grain. In dairying sections this is especially the case, and in sections where cattle feeding is developing, such as those adjacent to Kansas City, Omaha, and others, a very large part of the grain is consumed on the farm, and facilities for storing it are therefore required.

On the other hand, where grain growing for market is the feature of farming, the sale of the grain direct from the thrasher seems to be the rule. It is said that 75 per cent of the grain of the Northwest is put upon the market before the end of the year. South Dakota is reported as having farm granary capacity for only about one-tenth of its grain crop. About one-fifteenth is stored in cooperative warehouses or elevators, and one-fifth put into local warehouses waiting for a rise of price. In Oregon wherever diversified farming is practiced the farmer is fully provided with granary room, while in the eastern section farmers practice storing their grain in public warehouses, either locally or a large portion is shipped for storage to Portland. At least 50 per cent of the wheat and barley grown in the wheat district of Washington is delivered to the regular wheat dealers immediately after it is thrashed—that is, by the end of October. In Montana barley is sold so directly that it is even contracted for by buyers before it is harvested for export.

The experience of a Northwestern observer is to the effect that the system of grain selling by all producers at the same season is the feature of the present practice that causes most injury to producers' prices. He says:[1]

"Taken all in all, the man who is in the habit of selling his wheat soon after harvest is as well off as he who is in the habit of holding for a higher market. But there are those who have the shrewdness, foresight, or luck, if you please, to sell at the right time, whether prices are likely to rise or fall. High and low prices usually follow each other in periods of two or three years. In 1894, 1895, 1896, and 1897, when the market advanced from 23 to 35 cents, 35 to 40 cents, 45 to 60 cents, 60 to 85 cents, from three to six months after harvest, these "lucky" fellows held their wheat, but after the price dropped from 85 to 50 cents, in 1898, and from 45 to 40 cents in 1899, these men let their grain go as soon as harvested. This would seem to indicate that after a period of low prices is the time to hold, and after a period of high prices is the time to sell with the first market. We will all get the "hang" of these things after a while. But it would never do for the custom of selling at the first market to become universal, as the first market would then always be low."

GRAIN FARMING VS. MIXED FARMING.

On the question of selling immediately after thrashing much more is to be said on both sides. It seems clear, however, that grain farming as distinguished from mixed farming results in, if it does not require, an early or immediate sale of the crop, wholly or in part, in order to realize ready money for payment of debts that fall due at this season of the year. Time obligations in the grain-farming sections mature at harvest time. The household expenditures for the fall and winter have to be made. The loss by storing may be greater by far, if the storing is not properly done, than any gain in price would be within the next few months at any rate. Storage of 10,000 bushels, for example, on the farm may be too great a risk for the producer to take. The reason, then, for the early marketing of grain is, first, financial necessity on the grower's part, and, secondly, the risk and expense of providing facilities for holding the same for a better market.

There seems to be no safe escape from the practice of selling grain from the thrasher, on the part of those producers whose sale or main reliance is put upon grain as a money crop. To hold it is to speculate at too heavy a risk for their financial safety; to sell is the only way open. Cash capital is too scarce to do anything else. As they are working largely on borrowed capital in one form or another, prompt selling from the field is the only way available under these conditions.

Within the last five years a very remarkable change has come over the financial condition of the grain-growing States generally. The higher prices prevailing during this period have left surplus cash in the bank in rural districts that never before knew of such an abundance of money. One effect of this state of things has been to enable grain growers for the first time to emancipate themselves from debt and to utilize the surplus in a better equipment of the farm.

This new factor of surplus capital has radically changed the relation of the producer to the grain market. Wherever it has figured, it has tended to break up the extensive system of grain growing as the sole source of income, and to reduce the land holdings to a size commensurate with the labor capacity of the family in mixed farming. The yearly outlay of labor in mixed farming under this system is distributed more evenly throughout the year than in grain farming. The annual income is likewise distributed more evenly; the results of the year's labor are marketed to greater advantage. More of the grain crop has been consumed and less put on the market. Particularly has this been the case in the corn section, where this has been utilized to begin dairying. It put the producer of grain in an entirely different relation to the market by making the dairy herd itself the consumer. Where the stocking and feeding of cattle has been engaged in, the same result has come to pass, namely, that the producer has himself become the best customer for his surplus grain.

Finally, another effect of the change in the financial status of the grain-farming sections has been to improve the commercial relation of the farm in quite another way. The combination of grain production and stock raising or dairying has led to the cultivation of grasses, resulting in the addition of hay to the list of commercial crops. All of these changes have multiplied the number of cash-commanding crops—crops from which cash income is derived not at one time, but frequently throughout the year.

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[1] From the Portland Oregonian.

The conclusion to which these facts point—facts full of bitter experience to the once helpless grain grower—is simply this, that the position of the producer will never be what it ought to be to make him economically safe until the grain grower is so situated as promptly to adjust his farm policy to the changes in the level of market prices. This can be done under a system of mixed farming in which such combination of crops can be made as to enable the farm to utilize the major part of its raw materials as an alternative to marketing them at a sacrifice price. This requires a more or less self-sufficing system of farming, such as Ohio and Michigan have developed. Any other system than that which enables the producer to make himself and his household more or less independent or adjustable to a ruinously low market for farm products is commercially weak. Such is the case with all single-crop farming.

As a matter of experience the exhaustion of farm capital in one form or another is ordinarily the sure consequence of single-crop farming. This is as true of the extensive system of wheat farming in the Northwest as it is of the exclusive system of cotton culture in the South. The only way by which the farm in its relation to the market can stop the exhaustion caused by low prices of raw products is by following the self-sufficing policy of consuming its own supplies in domestic or near-by industries, as the first essential of good farming, and then making secondary the production of a surplus or money crop to be transported to distant points for consumption. The ratio of supplies to surplus in farm policy varies greatly with each farm's total output; but if supplies are not first made certain the fall of market prices may oblige the producer to part with his crop at less than cost of production. He must sell even at a loss. A succession of years of poor crops and low prices oblige him to repeat this exhaustive process of production at a loss. Consequently only a few years are required to impair his credit, exhaust his cash capital, and impair the efficiency of his fixed capital in the form of machinery, live stock, and improvements of the soil.

Farming solely or substantially for a money crop is primarily a speculative enterprise. As such it ranks between mining on the one hand and merchandising on the other. The merchant who sells regularly below cost becomes bankrupt. The tendency of modern economic development is to differentiate nonhazardous enterprises from hazardous ones. Farming for supplies first is relatively nonhazardous. Farming for surplus raw materials with which to buy supplies is hazardous to the extent of extinguishing the whole system devoted to it, leaving only the self-sufficing system to survive.

The Illinois department of agriculture, in its inquiry as to cost of production of the corn crop of 1886, came to the conclusion that the loss on that year's crop was $20,000,000, and on the crop of 1887 $17,000,000—that is, a loss of 10 cents per bushel in 1886 and of 13 cents per bushel in 1887.

Whether these figures be trustworthy or not, they undeniably indicate that farm prices then prevailing for corn were not covering the cost of cultivation for the general market. If so, then the corn crop was exhausting the capital of the farm by being made a surplus rather than a supply crop. Corn farming in Illinois was in the position of cotton farming in the South—a capital-exhausting crop.

LOCAL CONSUMPTION THE STRENGTH OF GRAIN FARMING.

The commercial position of the cereal producer is shown to be strong or weak according to the degree to which the farm household has developed the capacity to consume or to market the raw materials of the farm. The corn-growing States of the cereal section, in Nebraska, Kansas, and Iowa, where dairying and cattle feeding have advanced, indicate the latter results in this direction—results which have long since been realized in Ohio and Michigan.

What seems to be the way out of this situation? As a matter of sound economic policy the farm must be brought into closer relations with the consuming mill. Those Northwestern grain growers, who have quite convenient access to the terminal market at Minneapolis, where 65,000,000 of bushels of wheat are consumed annually, are far more favorably situated selling at 60 cents per bushel than the Dakota farmers, whose wheat sells for 45 cents per bushel at the country elevator.

The true policy lies in the development of a domestic demand for the grain products of the farm in the same community or near-by market. We have so completely saturated our national mind with the idea that centralization is the inevitable tendency in all industry that we fail to realize that decentralization is just as inevitable as is the ebb of the tide that has risen. So in the progress of grain growing the rise of local grain-consuming industries has already begun in the Northwest. The building of a large number of small breweries at distant points from Milwaukee, in barley-growing sections, has afforded a corresponding number of local markets in many communities for the producer. They all have the advantage of being near the source of raw materials. The erection of flour mills in the Dakotas, where the superior wheat can be grown separate from mixture with inferior grades from other sections, gives local milling industries an advantage which no other place in the country enjoys. Flour made from Dakota wheat has no rival in the world market, and this distinctive local quality can apparently be preserved only by consumption on or near the places of production, because once the wheat is in the hands of the trade it becomes worth more to mix with other wheat than to grind alone. Every bushel of wheat that is shipped out of the unfamished fields of the Dakotas to be ground is a loss not only to the farm in by-products of wheat, but a loss in local quality of the manufactured product, a quality that has a value of 15 cents per bushel over other wheat at Liverpool, and that can be conserved only by consumption more or less directly from the farmer.

These are some of the economic aspects in the relation of the producer of cereals to the market in different sections of the grain area, so far as that relation is affected by the system of farming in vogue. The fact is clear that a distant shipment of the raw products of the farm is full of possibilities of failure to the farmer. The grain farmer must seek a consuming market nearer home and market his products in a more valuable form in order to compete with Argentina and the East. The Northwest will find that its permanent economic welfare lies in the direction of diversification in the expenditure of rural labor and capital. Here, as in California,[1] even after wheat growing continued to be profitable, decreasing yields and low prices must tend toward a system of mixed farming that will greatly enhance in the long run the commercial value of the farm income.

The producer's relation to the grain market in the distinctively spring-wheat sections of the Northwest is often critical in times of low prices. Here the system of farming is apparently less developed than elsewhere in the direction of self-sufficiency. The wheat farmer can not use his wheat crop on the farm as readily as the corn-growing farmer can in stock feeding.

There have been times when hogs were grown on wheat in the Northwest when the market price would not pay to sell it, but that has been exceptional. We have to do with general conditions. These conditions for the time being are favorable, and will remain so while the price of wheat holds its present high level. But as soon as Argentine, Australia, and India together have a favorable wheat yield, then we shall again see weakness in the commercial situation of wheat-growing agriculture. This weakness is inherent in the system, and its relation to the market inevitably brings to light its lack of resisting power in a prolonged period of low prices.

The policy of prevention by adjustment of flour manufacturing as a local industry to wheat growing is in line with the historical development of the milling industry itself. On this question a recent inquiry says: [2]

"The development of the milling industry has consisted largely in a movement from the East to the West, or, in other words, in a movement toward the wheat fields. This development has been natural in so far as the general tendency is to transport the finished product rather than the raw material. The rates on flour and on wheat, per hundred pounds, have been about the same, but the value of the flour transported has been greater than that of a similar quantity of the wheat from which it was made.

"The statistics of annual export prices for the last 25 years show that, at the city of export, the price of a barrel of flour averaged five and one-fourth times the price of a bushel of wheat, while the bulk of the flour was only three and one-third times as great. The greater value of the finished product thus made it cheaper to transport it than to transport the raw material from which it was made.

"On the other hand, it is stated by many that the eastern mills have the advantage in the matter of freight rates, owing to the fact that not only the flour but the bran and other by-products must be transported from the western mills, and that in the East a better local market exists for these by-products and insures a fixed source of income and a consequent advantage in the production of flour."

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[1] Transactions of the California State Agricultural Society, 1900, p. 6.
[2] Grain Trade of the United States, January, 1900.

V.—DISTRIBUTIVE MOVEMENTS TO THE SEABOARD.

1. THE GREAT LAKES AS GRAIN DISTRIBUTORS.

The distributive organization of the northern portion of the United States between the East and the West is, as has already been pointed out, largely controlled by these lakes. In the transportation of agricultural products, both raw and manufactured, this is eminently the case. The eastern end of this group of commercial waterways reaches to within about 400 miles of the seaboard. The northwestern end, at Duluth, extends out into the very heart of the spring-wheat section of the country, and the southern end, at Chicago, reaches down into the heart of the great corn belt. Between Chicago or Duluth and Oswego lie a thousand miles of water, connecting the greatest consuming with the greatest producing section of farm products. These lake routes, plus the Erie Canal on the American side and the St. Lawrence River and its canals on the Canadian side, are the controlling factors, not only in determining the volume of movement in the North from West to East, but also the rate per unit at which that volume shall be distributed between producer and consumer.

Eastbound lake commerce in agricultural products has centered at Buffalo so generally that the facts for this port in connection with the points of origin will fairly represent this movement in farm products. Of these products, of course grain is the principal article of transport. For the season of 1898 the following table shows the receipts of grain, including flaxseed, and flour reduced to its equivalent in wheat. The movement is for the season of lake navigation only, a period of less than 8 months, or 215 days, from 15 Western points of shipment:

Port of shipment of the Buffalo grain receipts.

[From Buffalo Merchants' Exchange.]

	Wheat.	Corn.	Oats.	Barley.	Rye.	Flax.	Total.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*
Chicago	23,083,439	54,792,171	23,209,639	2,679,557	2,198,793	1,711,389	107,574,988
Duluth and Superior	42,037,307	3,003,860	4,597,500	2,423,614	1,633,400	4,106,336	57,802,017
Milwaukee	1,943,500	5,535,937	7,838,711	3,265,657	982,426	15,990	19,582,221
Toledo	10,203,600	1,932,511	30,000		78,000		12,244,111
Fort William	4,264,504					732	4,265,236
Washburn	75,063	1,061,885	2,511,200	1,080,652	619,000	12,329	5,360,129
Greenbay	336,000	25,000	1,717,600	971,499	326,000		3,376,099
Gladstone	111,000	215,000	2,947,383	143,778	228,724		3,645,886
Manitowoc	361,000	188,000	2,549,200	926,575	594,350		4,619,125
Cleveland	90,000	1,117,709					1,207,709
Detroit	1,284,500	78,000			161,000		1,523,500
Port Colborn	21,924						21,924
Port Huron	61,000		50,000				111,000
Sheboygan			50,000				50,000
Total for 1898	83,872,837	67,950,073	45,501,233	11,391,332	6,821,693	5,846,776	221,383,915
Flour for year 1898, 10,371,653 barrels, reduced to bushels, equals							51,858,265
Grand total for season							273,242,210

The influence of the lakes has been enhanced by the shifting of the area of wheat cultivation. This has evidently widened the market for American wheat by reducing the cost of transportation, and therefore the cost to the consumer in domestic and foreign centers of consumption. Mr. G. G. Tunnell's report on lake commerce indicates the main factors as follows:

"The striking fact in the history of wheat growing in the United States during the past 30 years has been the westward and northward movement of the surplus wheat-producing areas. At the beginning of the period under consideration New York and Pennsylvania held prominent places among the wheat-producing States, and the great wheat-raising States were for the most part on the southern shores of the chain of Great Lakes. By the middle of the eighties all this was changed and a large proportion of the surplus wheat grown in the United States was harvested in the far northwest, the Dakotas and Minnesota being the principal wheat-growing States. The last column of the foregoing table discloses the present importance of these States, two of which produced no surplus wheat until the middle of the period under examination. The westward and northward movement of the wheat-raising areas has had a very decisive influence in the selection of the agencies employed in the movement eastward of the grain produced. When the grain to be shipped was raised in Ohio and Indiana, and in the southern portions of Michigan and Illinois, it was almost sure to go by rail, for in nearly all cases shipment by water would involve a short rail haul to the lakes, with its high local rates, and in some cases after the grain reached the lake it would be only slightly advanced in its eastward journey by lake shipment.

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"From these points the railroads possess a decided advantage over the lake carriers in the point of distance, for the latter must round the lower peninsula of Michigan, while the former run directly across country to their destination. From Chicago to Buffalo by lake is 889 miles, while the distance from Chicago to New York City, by the shortest rail route is but 912 miles.

"From Buffalo to New York City by the shortest rail route is 410 miles. It appears thus that every mile covered in the passage to Buffalo by lake results in an effective eastward movement of 0.564 mile. By the westward and northward movement of the surplus wheat-producing regions the situation has been wholly changed. The districts which formerly produced the surplus that was almost certain to go by rail now grow but little, if any, more wheat than will satisfy their own necessities, but the location of the new wheat-growing areas is the important factor. These districts are located directly west of Lake Superior.

"As a result of this northward and westward movement of the wheat fields the railroads have lost the advantage in point of distance which they formerly possessed. By the shifting of the wheat-growing districts the lake carriers have been placed upon terms of substantial equality with railroads. In shipping by lake from Chicago it was found that every mile traversed in the passage to Buffalo resulted from the head of Lake Superior is not accompanied by this wasteful expenditure of energy. Every mile the grain is moved results in its being practically 1 mile nearer one of our great exporting ports.

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"The shifting of the surplus wheat-producing districts has been accompanied by a corresponding movement of the great milling centers. From 1878 Minneapolis has, with but few interruptions, steadily increased her output of flour, reaching the enormous total of 12,874,890 barrels in 1896. At the head of Lake Superior, in the cities of Duluth and West Superior, there has recently sprung up another important milling center.

"As the milling industry has in a large measure followed the wheat-growing region westward and northward, it follows that the lakes are now in a more favorable position for competing for the flour traffic than formerly. * * *

"We find in the case of flour, as in the case of wheat, that the shifting of the places of production has put the water carriers in a more favorable position to meet the competition of the railroads. The lake carriers are no longer handicapped by an excessively circuitous route."[1]

2. WHY NEW YORK HAS LOST GRAIN TRADE PRESTIGE.

The much discussed question of the status of New York as a grain-exporting point may be summed up in two propositions. In the first place the unduly strong desire of the leading trunk line to conceal the weakness of its own position and its unwillingness to abandon its antiquated methods as a competitive carrier of grain to the seaboard have led it to pursue a policy for over 15 years of "peace at any price" with competitors north and south of New York, competitors, too, which have been all the while improving their methods for handling grain more economically at the seaboard. The history of the policy thus adhered to is simply as follows:

The direct transfer of grain from cars to vessels or from cars through elevators to vessels alongside of the docks was abandoned after having been successfully in operation from 1876 to 1882. The older and more expensive method of handling grain by lighterage was reverted to at New York. In accordance with an agreement among the trunk lines New York, Philadelphia, and Baltimore, prior to 1882, imposed an elevator charge of 1 cent a bushel for transferring grain to vessels. At the time about one-third of the New York receipts was loaded directly from elevator to ship free of charge; the other two-thirds were subject to lighterage charge of 1 cent per bushel at New York. The facilities at New York were such as to make it impossible to load all grain on ships without lighterage. In the spring of 1882 Philadelphia and Baltimore, where all grain could be loaded directly from the docks on the ships, refused to continue this charge of 1 cent a bushel unless it were enforced upon all grain transferred at New York. The New York Central and the Erie roads were therefore put in a position of either abandoning their elevators and lightering at their own expense all their grain to vessels or of imposing a charge on vessels which would tend to drive them away from New York. For the sake of harmony the direct elevation into vessels was abandoned for the lighterage system of transfer and the charge of 1 cent maintained. Shortly afterwards the policy of relieving grain at seaboard points from all charges for transfer from car to ship began on the Gulf and the South Atlantic ports. Boston on the north followed the same policy as the newer ports to the south. In spite of the recommendation of the New York Railroad Commission the charge of 1 cent per bushel at New York was not abolished. The lighterage business has fallen into the control of a single elevating company which imposes a charge of 3 cents per 100 pounds for a service that on the basis of similar services elsewhere seems not worth more than a half a cent per bushel.[1]

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[1] Statistics of Lake Commerce, pp. 41-45.

On the effects of this policy upon distributive interests the opinion of the Commission in 1883 holds good to-day, in view of the fact that the terminal facilities of New York for handling grain have made almost no progress during the past 20 years; "The abandonment of an improved and more economical method and a return to primitive and more expensive handling is a step backward and is not right. For an economy in service, devised and maintained at great expense, an onerous toll upon commerce is reimposed at actual increased cost to both railroad and shippers. An obstacle removed from a great channel of commerce by means of vast outlays is sought and restored to its place. The wise policy of cheapening terminal facilities is abandoned and an unnecessary and useless toll is levied.

"The shipper is injured because this charge imposes upon him the loss arising from increased handling and elevator charges from the lighter, and also deprives him of the use of cheaper and better facilities. Were the railroads, on the other hand, benefited, a serious question might arise; but such is conceded not to be the case. The railroads, in order to complete their contracts, have to pay for lighterage service from their earnings. Ultimately those whom the roads serve are charged with this amount. This arises from the fact that to the extent that the roads are entitled to have this amount made good to them the public upon other business will have to pay increased charges."

The second cause of New York's loss of grain traffic is not local, but general. The Erie Canal has stood still, while all other means of transportation have progressed and improved. The whole mechanism is too disjointed and individual to affect economies in its methods. The boats in use do not carry enough, their time of arrival is uncertain, the boatmen do not seem to work harmoniously with consignees, and the system of unloading and disposing of the grain at New York is not by any means reduced to the automatic methods which railroads have developed in their relations with their patrons.

There are remoter causes than these for New York's loss of traffic on grain, as has already been intimated. The loss of grain trade to Montreal from Buffalo is only a symptom of the loss of trade from the lakes to the railroads in Canada and the United States.

We need not look for radical change in the near future. As the grain States around the lakes consume increasing proportions of their product the States lying farther into the interior and the Northwest will constitute the chief surplus States, and these are more likely to seek the Gulf and the Pacific ports as their outlets than by way of the East.

On the outlook for the grain movement southward from the interior the views of President Stuyvesant Fish are here in point. The natural advantages of a descending grade for loaded trains, even with the return trips being made by empty cars for the greater part, is a highly favorable factor in the southward movement of grain. But there is another factor of freer competition among the south-bound railroads than the eastern trunk lines openly allow—a competition which has at times reduced rates from Kansas, Nebraska, and Missouri to the Gulf to a figure as low as the rate from these States to Chicago.

3. INFLUENCE OF THE GULF MOVEMENT OF GRAIN.

Within very recent years the winter-wheat center has shifted southwestward toward the ports on the Gulf of Mexico and away from the lake ports. The eastward movement of grain by rail is influenced on the one hand by the Erie Canal and the Canadian system of waterways to the sea from the lakes. On the other hand, the trunk-line grain traffic is influenced by the water rates down the Mississippi to New Orleans and thence to the Atlantic ports or to Europe by sea. Water competition is therefore the first factor that determines the charges on the distribution of grain to the consuming centers in the East. The limits set by the cost of carriage by lake and canal on the north and by river and ocean carriage on the south oblige the railroads to keep their rates down to something like the rates by water. Formerly, when the season of navigation closed on the Erie Canal the rail rates rose, and fell again with the opening of the season. Water competition through the Gulf ports, coupled with the railway competition reaching the Gulf, has robbed the trunk lines of even this advantage. Prior to the opening of the Gulf ports in 1889 the corn rate on Eastern trunk lines was advanced to 25 cents upon the close of navigation. Within the last 5 years the southward competition has become so effective as to prevent this advance entirely. The result of Gulf competition has therefore led to a lower rate and also to a more regular rate throughout the entire year. Both of these results are desirable within limits. Water competition tends to determine the normal rate; it regulates rates rather than sets limits to the force of competition among carriers of grain.

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[1] Report New York State Commerce Commission, pp. 100-101.

COMPETITION AMONG RAILROADS.

Let us now examine this situation as it exists among the railroads, because by competition among themselves they have done more than the water routes to force down the cost of carrying grain to the seaboard.

On the Atlantic seaboard there are five ports connected by railway lines with the primary grain markets of the interior, either by rail or by water and rail routes. The shortest rail line had formerly been regarded as in the best position to get this traffic from the eastern lake ports to the seaports. This favored carrier was the New York Central; and New York City, by virtue of the Erie Canal, was regarded as naturally entitled to the lion's share of the grain traffic to the East and for export. While this position was conceded by other carriers, it was not accepted as the end of the matter. Other roads, naturally less favored, found in reckless competition a means of wresting concessions from the Central in the form of a differential. This differential was an attempt to equalize the opportunities for getting eastward traffic among the trunk lines, by maintaining lower rates for the less-favored roads in proportion to the disadvantage of extra rail distance above that of the Central. The differentials granted at first to Boston, Philadelphia, and Baltimore covered disadvantages in exportation also from these ports. Later, this differential was extended to Newport News, as a means of setting limits to the competitive struggle for a division of traffic among the trunk lines concerned. This arrangement, as a working basis among competing grain lines began in 1876, and has not since been successfully atacked in principle, though there have been reductions in the amount of the differential.[1] But such reduction in the amount of the differential has been due rather to the equalization of the export facilities of the different lines than to unsoundness of the principle of partition of the grain traffic as a working means of avoiding cut-throat competition.

THE COMPETITION OF SEAPORTS.

This is the third element in determining the transportation charges on farm products destined for foreign markets. The progress made in the development of export facilities among some of the competing ports and the absence of such progress, or the positive retrogression of others, goes far to explain the more recent changes in the relative importance of the competing seaports.

4. CANADIAN COMPETITION WITH AMERICAN RAILROADS.

Having examined into the economic consequences of this assumed ascendency of the railway grain carriers, let us see whether the trunk line situation and the Southern rail movement, in their relations to water carriage, have really the elements of permanency in their organization. The following considerations of fact are calculated to discount the idea that railroads are in a position of permanent control of the seaboard movement of grain:

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[1] The Report of the New York Commerce Commission (1900, p. 41) takes a different view of the differential as a regulative of free competition. "The imposition of the differential is a recognition," it concludes, "of the fact that freedom of competition would inure to the benefit of New York." This view forgets that the first business of a railroad is to earn regular dividends on invested capital, and that the question of increasing the road's serviceableness to the noninvesting portion of the community is subordinate to considerations of certainty in meeting its financial obligations.

(1) It is a fact admitted by successful and economically managed trunk lines that the rate at which grain is being carried from Buffalo to New York for the past several years is too low to be worth making any further reductions for its control. The testimony of grain exporters from Chicago indicates that the Eastern trunk lines have reached the rock bottom of reductions.[1] About 1895 the competition of Gulf and Canadian lines began to make it impossible for exporters to ship by way of New York. "All of us went to New York and begged the trunk lines east of Buffalo to reduce their charges or do something to help us from losing all that business to the Gulf. * * * We begged them and told them it was going, and asked them if they couldn't possibly do something to reduce their rates east of Buffalo, so that we could use the water transportation. The officials of the Eastern roads stated that the grain business did not pay them much and they would practically prefer to ignore it. * * * In the meantime Montreal came to our rescue, and, as far as Chicago is concerned, we now don't care much what New York does do."[2]

(2) It is further an accepted fact that the grain movement tends constantly to reach the seaboard by the shortest all-rail route available for that purpose. This fact is a matter of history. Consequently one hope of future reduction in cost of carriage eastward depends on substituting water distance for rail distance wherever practicable. This has been done by Canada by improving St. Lawrence transportation. This can be done by the widening and deepening of the Erie Canal, by which wheat may be carried from Buffalo to New York for a cent a bushel. This would reduce the rail distance to the distance from the wheat fields to the primary markets on the Western lakes. This is substantially what Canada has done. The rail distance may also be reduced by constructing a ship canal round the Niagara Falls on the American side, and thus reducing by 150 to 200 miles the rail distance from lakes to seaboard.[3]

The facts appear to be about as follows on the present portion of traffic in grain going eastward through the Atlantic ports, both American and Canadian.

The grain receipts at all Atlantic ports for the past 3 years is expressed in percentages of bushels.

Ports.	1897.	1898.	1899.
New York City (rail)	36.4	36	36
New York City (canal)	6	4.9	4.8
Boston	9.6	10.7	12.6
Philadelphia	10.8	12	12.8
Baltimore	18.1	17.8	17
Portland	1.7	0.5	0.5
Montreal (river)	2.4	3.1	2.2
Montreal (rail)	5.7	6.9	6
Norfolk	3.4	2.3	1.7
Newport News	5.9	5.8	6.4

It will be observed that these proportions show but little variation for 3 years, and none whatever for the past 2 years. Another important fact shown is that Baltimore has had a depreciation, which evidently was due to the increase at Philadelphia, that gain being attributed to the improved and enlarged facilities of the Pennsylvania and Baltimore and Ohio at that port, while Newport News, which has been held up as a damaging competitor of New York, does not appear to have had any such enormous growth as it has been accredited by common report. Much has been heard also of the great diversion to Montreal of export grain, but the foregoing figures do not show it.

The growth of Canadian competition has no injury in store as a carrier for the American producer nor for the European consumer. The St. Lawrence chain of canals gives 14 feet of water from Port Colborne, on Lake Erie, to Montreal. Great results are expected, involving from the lake region a large diversion of business which has heretofore sought the seaboard by American routes. The reason for this expectation is that the water route this way will be shorter, quicker, and perhaps cheaper than by the Erie Canal.

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[1] Testimony of President S. R. Callaway, Industrial Commission: Transportation, pp. 225, 233.

[2] Testimony of George E. Marcy, of P. D. Armour & Co., p. 15, New York State commerce commission.

[3] President T. P. Fowler, of the New York, Ontario and Western Railway Company, in New York Times.

With 14 feet of water to the Great Lakes and 27 feet to Quebec, the port is better equipped than ever before for ocean business. Government improvements are under way in the harbor and in the channel. They will result in the expenditure of $10,000,000 in the harbor and $6,000,000 in the channel, providing the east end of the harbor with new docks and the channel to Quebec with 30 feet of water. The local harbor commissioners have arranged for piers of concrete, and hope that within 2 years the entire water front may be so supplied. This will do away with the antiquated wooden piers which the spring floods always submerge and from which sheds and other structures must always be removed in seasons of high water.

The consequence of this development will be that the American seaports on the Atlantic will be forced to get rid of their antiquated methods of handling grain somewhat quicker than they would have done had Canada not entered the distributing field for European export.

5. WHAT DETERMINES THE COURSE OF TRAFFIC.

In general the stream of commerce seeks the outlet of least resistance. Historical forces have much to do, however, in changing the course of the commercial movement. After much effort the political obstacles which stood in the way of free navigation of the Mississippi River were removed and that highway became the natural outlet for the surplus farm products of the vast interior plains. But the war between the States closed that outlet and the main movement thenceforth sought egress by way of the lakes and the Eastern trunk lines to the sea.

Among these competing trunk lines natural advantage of grades has long sufficed to give to the most favored lines in this respect the upper hand in the grain traffic. But gradually even this great advantage was offset by improvements in facilities for handling grain more and more economically. Thus has come to pass the more recent ascendency of Boston, Baltimore, Newport News, and New Orleans as grain-receiving ports. Of course the shifting of the winter wheat area southwestward has brought the Gulf ports nearer and put the Northern Atlantic ports farther than ever from the wheat fields of the interior. But, apart from this, the course of traffic seeks the line of greatest commercial economy rather than that of the least physical resistance.

The diversion of grain traffic from Buffalo to Montreal is an illustration of this same principle that economic foresight rather than the advantages of nature determines the course of traffic. The failure to provide improved facilities for canal and river traffic in the United States generally has put the railroads in command of the grain-carrying situation. Even flour from Minneapolis has begun to move south and east to the seaboard by all-rail routes, even leaving out the lakes entirely with all their natural prestige.

One cause of this is no doubt to be found in the unusually high lake rates during the past year or two by which the grain and flour trade has to some extent been diverted to Canada from Buffalo, to the railroads from the lakes, and to the Southern railroads from the Eastern trunk lines. This condition may have come to stay. One thing is sure, at any rate: no port or party to commercial movement can be sure of controlling even a customary portion of traffic without adjusting itself to new requirements. This is the situation at Buffalo now. Its bearing on the grain traffic is evident from the following official statement for 1899:[1]

"The past year has shown a marked falling off in the receipts of grain at this port. This falling off was due principally to two causes, both temporary in character. One of these was the prolonged labor difficulties on the docks last spring, which kept vessels away from this port on account of the fear of delay in unloading their cargoes here. The second, and more important cause, was the very high freight rates prevailing on the lakes during the season of 1899. The great activity in the iron and steel trade produced a very large movement of ore on the lakes, and ore shippers chartered vessels at very high prices to move their ore. Grain shippers, to obtain vessels, were obliged to meet these prices, and the rate of freight on grain was therefore much higher than in recent years. This brought the railroads into the field as grain carriers, since owing to the high freight rates, they were able to compete with the lake route during the year 1899, although while the low freight rates of previous years prevailed they had been unable to meet lake competition. A large amount of grain was therefore diverted from the lake route to all rail route from the West to the East. It is not at all improbable that equally high freight rates will prevail on the lakes during the seasen of 1900, as the great activity in the iron and steel business continues and the iron-ore shippers expect to move about two million more tons of ore in 1900 than in 1899. The railroads are therefore likely to be an important factor in grain transportation during the coming year, and the lake receipts are not likely to reach the high totals of 1898. The completion of the Canadian canals and the project of the Conners syndicate to divert a material portion of the grain trade to the St. Lawrence route have been matters of great interest to the grain trade here and to the elevators and other interests connected with the grain trade. The St. Lawrence scheme has, however, done more than anything else to develop public sentiment in the city of New York and city of Buffalo for Erie Canal improvement, and if the result is an adequate improvement of the Erie Canal, such as that outlined by the canal advisory commission, it may be decidedly beneficial to the city."

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[1] Buffalo Merchants' Exchange, 1899, pp. 50, 51.

VI.—EXPENSES OF INTERIOR AND FOREIGN DISTRIBUTION.

1. COST OF MARKETING CORN IN INTERIOR TOWNS.

The movement of cereals from the centers of the visible supply to interior centers of consumption constitutes the principal feature in the distribution of the surplus crops of the West. We consume far more than we export of the portion that passes out of the farmers' hands. Corn and oats are representative cereals in this movement. The main directions are eastward and southward from the great primary markets. We have made a calculation of the cost, based on value to consumers, at Hartford, Conn., as the place of consumption, for which freight rates could be ascertained. This rate was quite constant for the entire year of 1898, so that it represents the established conditions under which distribution was accomplished.

In attempting to assign to the different agencies of distribution their proper share we have first to obtain the prices to consumers at the different points selected. These were given us by the secretaries of the respective boards of trade of these cities for the date in question. Where a maximum and a minimum price has been given and the difference amounted to only a few cents, the maximum has been taken as the price which the consumer paid and has been made the basis of the calculation. The next step was to find the average farm price in Illinois at this date. This figure is given in the Yearbook of the Department of Agriculture. If Illinois can be taken as a representative corn State, with the advantage of a good terminal market near at hand, and if the farm price given by the Department of Agriculture fairly represents the level of value of the product to the farmer at the railway point of origin, then the difference between the actual price paid by the consumer and the price received by the producer should, approximately at any rate, represent the gross expenses of distribution between producer and consumer. Now, one of these items is fixed, namely, freight from Chicago to the place of consumption. All the rest of the distributing expenses must be calculated. These expenses are divisible into two other heads, namely, the cost of getting the surplus corn from the farm to the terminal market at Chicago. This we call the cost of concentration. The other share of the expenses is commission, but both of these shares must come out of the difference left after the freight is deducted from the excess of consumer's cost over the farm price.

In the calculation the consumer's cost of No. 2 Western corn at Hartford, December 1, 1898, is divided among the different participants who share in the distribution and followed by a statement of the proportion or percentage that goes to the farmer, to the transporter, and to the trader on the basis of a given cost to the consumer.

Distribution of consumer's cost of No. 2 Western corn at Hartford, Connecticut, December 1, 1898.

	Cents
Price paid by consumer	52
Farm price of corn in Illinois	25
Difference available for apportionment among agencies of distribution	27
This sum for apportionment is divisible into three shares:	
(1) Cost of concentration at Chicago (difference between farm price and Chicago price)	9.25
(2) Freight, Chicago to Hartford	10.92
(3) Balance for commercial services in distribution	6.83
Total distributive expenses	27.00

Consumer's cost is apportioned as follows:		Per cent.
Total consumer's cost (52 cents)		100
(1) Transportation charges:	Per cent.	
(*a*) From farm to Chicago (9.25 cents)	17.8	
(*b*) From Chicago to Hartford (10.92 cents)	21.0	
		38.8
(2) To commercial charges (6.83 cents)		13.2
(3) To average farm price (25 cents)		48
Total		100

These figures show (1) that among the expenses of distribution the railway charges are about three times the commercial charges; (2) that the expenses of distribution east from Chicago are higher than those of bringing the corn to Chicago from the farm for about equal distances, and (3) that the farther away from the producer the corn goes for consumption the smaller the proportion of consumer's cost that goes to the producer.

Data have been gathered from a few consuming markets on the expenses of distributing grain. Special inquiries made at Cincinnati, Ohio, Denver, Colo., Atlanta, Ga., and Washington, D. C., all of which are cities where consumption of cereal supplies is more or less important. The facts relate only to supplies of oats and corn.

Prices and expenses of interior marketing at certain cities.

Date of sale.	Kind and grade of product.	Consumer paid per bushel.	Producer received per bushel.	Combined expenses of distribution between producer and consumer, per bushel.	Percentage of consumer's price to distributors.	Percentage of consumer's price to producers.	Remarks.
May, 18, 1900.	Corn, No. 2 mixed	$0.41½	$0.35	$0.06½	15.7	84.3	Cincinnati.
Dec. 1, 1899	do	.31¾	.25¼	.06½	20.5	79.5	Do.
May 18, 1900	Oats, No. 2 mixed	.27½	.21	.06½	23.6	76.4	Do.
Aug. 1, 1899	do	.24½	.18	.06½	26.5	73.5	Do.
July 1, 1899	Oats	*a* 1.20	*a* .80	*a* .40	*a* 33⅓	66⅔	Denver, Colo.
Jan. 1, 1900	do	*a* 1.10	*a* .85	*a* .25	*a* 23	77	Do.
May 1, 1900	do	*a* 1.15	*a* .85	*a* .30	*a* 26	74	Do.
Aug. 1, 1899	do	.40	.32	.08	20	80	Washington, D. C.
Jan. 1, 1900	do	.50	.40	.10	20	80	Do.
1899–1900	do	.45	.30	.15	33⅓	66⅔	Atlanta, Ga.
1899–1900	Corn	.60	.30	.30	50	50	Do.
Nov.. 1899	do	*b* 2.25	*b* 1.75	*b* 50	22.2	77.8	Washington, D. C.
July, 1899, to July, 1900.	do	.36	.26	.10	27.8	72.2	
	Oats	.35	.25	.10	28.6	71.4	

a Per 100 pounds. *b* Per barrel.

2. INFLUENCE OF FOREIGN ON DOMESTIC DISTRIBUTION.

The competition of Gulf ports has resulted in promoting another tendency, that of charging a lower rate to the Atlantic seaboard on grain and flour when destined for export than when destined for domestic consumption. The Chicago-New York rate is the basis of all other Eastern rates. The competition of grain going abroad by way of New York with grain going by Gulf ports is at times so keen that the railroads either have to charge less on export and more on domestic grain or stop exporting altogether. In that case the Eastern center of consumption is charged a local rate which is relatively higher, and the export grain is charged a through rate which is relatively lower. It is the same principle as that of charging a high local rate from farm to primary market and a low through rate by way of the primary market to the seaboard.

This practice has been complained of on the part of milling interests, of shipping interests, and of producers, on the ground that domestic industries and trade, which it has been the settled policy of the nation to favor, are by this discrimination, discouraged to the advantage of foreign industries. There is great force in this criticism, provided the practice of charging a lower rate for foreign than for domestic shipments to the seaboard is made part of a permanent policy.

If, on the other hand, there is an excess of surplus wheat in the United States at the same time that there is to be an unusually heavy export of wheat from our competitors from the Southern Hemisphere, then a question of a few cents, more or less, on the whole cost of moving, may decide whether or not that wheat shall move at all. If it does not move in time to anticipate the arrivals of Argentine wheat, for example, it will greatly depress prices at home both of the present reserve and the future supply.

Another far-reaching effect of the export trade upon the expenses of distribution at home is seen in the reduction in terminal expenses, which are common to both foreign and domestic distribution. This relation has been so well defined by the Thurman arbitration commission on trunk-line rates that we quote it here:

"The prices of the leading American products, in the carriage of which the railroads compete most actively, are fixed in European markets. These products should net to the producer in the American market the foreign price, less reasonable charges for transportation and handling; and he is interested in having the trade open to the competition of as many buyers and the transportation to that of as many carriers as possible. Of the Atlantic cities which compete for this trade Baltimore and Philadelphia are nearest to the producer, but New York and Boston are nearest to the foreign market. Much is shipped to each of these cities for home consumption, but the major part of all that they receive is destined to a foreign market. Some of it passes from Western towns on through bills of lading to foreign ports, but the most of it is consigned to the merchants of the Atlantic cities and is reshipped by them. Except at Boston it has been found impracticable to distinguish between that intended for home consumption and that for foreign shipment; and, therefore, no discrimination in freight charge is attempted, but all is charged as if destined to a foreign market. But when so treated the Atlantic cities become merely so many points on so many through routes between the interior of the country and the European ports, and the charge on shipments must regard the whole lines and not parts of them merely. On these several through lines, competing for the same business between the same American towns and the foreign ports, the whole charges, if the routes are equally favorable, must be substantially the same, or the one giving the best rates would obtain the business. The question of ocean rates must, therefore, have an important bearing on the inland rates.

"Attempts by agreement or otherwise to counteract this law of competition would be of little avail and of no avail whatever for any great length of time. All the leading articles of Eastern-bound freight would be affected by this principle, and this would be so large a proportion of the whole as to govern the charges on all."[1]

The volume of our foreign trade is steadily growing; consequently "the influence of the foreign market upon the internal grain trade of the United States is becoming constantly greater. While the domestic consumption is rapidly increasing, it is not growing at as rapid a rate as the foreign demand. From 1867 to 1872 the United States exported annually 35,500,000 bushels of wheat; from 1873 to 1878, 73,400,000 bushels annually; from 1879 to 1883, 157,600,000 bushels annually. After this period there was a decrease in the quantity exported, the exports amounting to only 122,400,000 bushels from 1884 to 1888, and 144,400,000 bushels from 1889 to 1893; but during the last half decade (1894 to 1898) the export reached the annual total of 159,600,000 bushels of wheat. During these six periods the export of wheat was 15.53, 24.59, 34.91, 27.74, 28.86, and 34.96 per cent, respectively, of the total production, the proportion for these half-decennial periods varying between less than a sixth to over a third of the total crop."[2]

ORIENTAL OUTLETS FOR OUR SURPLUS CEREALS.

Recently the surplus grain of the Northwest and Pacific Coast States has found a newly opening market in the Orient. Most of the cereals shipped from Pacific ports, however, still go to Europe.

About half of the wheat flour shipped from San Francisco goes to the oriental countries of China, Japan, and the East Indies, and the greater portion of wheat and barley still goes to the United Kingdom.

Those who rely on rice-eating peoples, or peoples consuming cheaper grains than wheat, for a future enlargement of our wheat market, especially in the oriental countries, may well ponder the following facts and conditions:

"The fact that even in these famine times wheat is exported has also been misunderstood, and the government of India has been blamed for allowing it.

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[1] New York Commerce Commission, pp. 44, 45, 46.

[2] January Summary of Commerce and Finance, p. 1995.

The explanation, however, is a simple one. Wheat in India is a luxury as compared with the cheaper grains used by the people. The good price obtained by exporting wheat gives the farmers more money, and hence the possibility of a larger supply of the cheaper grains by importation. To forbid the natural laws of trade to work would be adding to the distress of the country, and only ignorance of India's economic conditions makes the demand for government interference. The wheat that goes out of the famine area brings in a larger quantity of cheaper grain better suited to the means of the people in their impoverished condition."

A more optimistic view of this market is presented from the side of the Japanese and Chinese consumers, with whom famines are rarely known and whose purchasing power is apparently much greater than that of the people of India. On this subject says President J. J. Hill:

"The wheat product of the world is about 2,500,000,000 bushels. In this country we consume about 5¼ bushels per capita. The average of the world using wheat for bread is about 4½ or a little less than 4½ bushels per capita. About one-third the population of the world eats wheat for bread and food, and about 1,000,000,000 do not. Now we ought to be able to reach a great many of these 1,000,000,000 whom we do not reach at present. In a small way the people of China and Japan have begun to buy our flour. Last year I think what would be in the neighborhood of 2,600,000 barrels of flour, or what would represent 12,000,000 bushels of wheat found a market in China and Japan. But there has been in the last 12 months difficulty in finding ships to carry but one-fourth, and I almost say one-eighth, of what would sell, or what the Western millers had orders for. A Western miller in Seattle told me that he could have sold 1,200 barrels a day if he could have found room on ships to carry the stuff to market. But he could not find room, on the average, for 100 barrels a day. * * *

"I have given the matter a great deal of attention and I know that at the present time the people in the Orient who are using flour can only get enough for making pastry, and have not enough to supply the people who want it. Actually considering the number of people who are there, it is difficult for us to comprehend the extent to which their wants would carry them or the quantity of food they eat. If in place of the four bushels and a half, which is the average of the wheat-consuming people of the world, those Chinamen would only take 1 bushel, that would only give them about three-quarters of a pound of flour a week, but it would take 400,000,000 bushels of wheat to supply them.

"I have been asked this question in regard to Chinamen: 'How can people working at from 10 to 30 cents a day buy flour? How can they afford to buy flour and eat it as food?' There are 400,000,000 people. If they should spend per capita 1 cent a day, it would take $4,000,000 per day to pay the bill, or nearly $1,500,000,000 a year, and we could not find the stuff to supply them. We could not produce it. We could not produce enough food to sell to give them equal to 1 cent per day per capita. Now that is a market that is capable of expansion. That market may be expanded.

"What is necessary to give us the benefit of that Eastern market? I answer you, there is nothing necessary except to provide the means to carry our products to that market at a fair price. Nothing more."[1]

There is in this outlet for our surplus wheat the possibility of raising the level of prices to producers. There are those who see no other outlook for the improvement of farm prices than this oriental demand. But the possibility of competition from the advent of the Trans-Siberian Railway must not be overlooked.

3. COMMERCIAL CHARGES IN FOREIGN WHEAT TRADE.

The items of expense in distribution may be divided into two classes—transportation and commercial. The latter items include all charges made for buying, selling, and performing other attendant services of such character in the commercial course of transit from producer to consumer. Knowing what the producer and the transporters get, we may without difficulty approximate the share that goes to the speculative trade for its services.

The price of winter wheat from Kansas laid down at the mill in Liverpool on December, 1898, was 90.9 cents per bushel. The average Kansas farm value for that year and that date was 50 cents per bushel. We assume that the relation of farm prices and foreign prices remained practically constant for the next 2 weeks, which was actually the case, if Chicago spot prices be taken as the criterion of constancy. The difference between the Kansas farm price and the Liverpool price is 40.6 cents. The railway rate from Kansas points to Chicago we take at 15 cents per bushel, and the rate from Chicago to Liverpool was 20.6 cents for he month of December, 1898. That would leave 5.3 cents per bushel for all comnercial charges of every kind.

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[1] Tri-State Grain Growers' Convention, pp. 160–161.

Tabulating the result by items, we have:

1) Gross cost to foreign consumer		$0.909
2) Distributive charges for freight	$0.356	
3) Price paid producer	.50	
		.856
Balance to commercial agencies		.053

We may apportion this result as follows:

1) Consumer's cost	$0.909, or 100 per cent
2) Combined expenses of distribution	.409, or 45 per cent
3) Price paid producer	.500, or 55 per cent

The commercial charges alone amount to 5.8 per cent of the value to the conumer. The transportation charges amount to 39.2 per cent of the value to the onsumer.

The following quotations give for a series of 19 years, 1880-81 to 1898-99, the verage spot price of No. 1 white wheat at San Francisco and the average ocean ates in iron wheat ships from San Francisco to the ports of the United Kingdom nd northern Europe:

Year.	Average price per cental.	Average rate per ton.	Year.	Average price per cental.	Average rate per ton.
98-99	$1.145	$6.50	1888-89	$1.343	$8.14
97-98	1.472	7.00	1887-88	1.402	6.54
96-97	1.267	5.93	1886-87	1.523	7.01
95-96	1.011	6.62	1885-86	1.435	8.12
94-95	.875	6.75	1884-85	1.318	9.50
93-94	1.012	6.89	1883-84	1.646	8.66
92-93	1.277	5.66	1882-83	1.735	11.68
91-92	1.636	7.77	1881-82	1.60	16.81
90-91	1.462	10.48	1880-81	1.428	18.2
89-90	1.286	9.31			

Evidently in this case the producer gets but little less than he did in 1880-81; here is a fall of 20 per cent compared with the price of 1898-99, on the average. ut in freight rates to Europe there has been a decline of 64 per cent. This lower ate has probably kept farm prices up by enlarging European consumption through educed cost to consumers.

We may examine this result a little more closely. The ocean rates on cereals or foreign markets have declined far more rapidly than the prices of these cereals n the past 19 years. The average spot price of No. 1 white wheat at San Francisco n 1880-81 was $1.42⅞ per cental, or 87.8 cents per bushel. The highest average in his period of 19 years was $1.73¼ per cental, or $1.04 per bushel (1894-95). This lustrates the range of prices. Though prices have shown a tendency to decline, et the decline has been followed by a recovery of nearly all lost ground.

Now, take the average rates paid for wheat in iron ships for spot engagements ree on board for the United Kingdom, Havre, or Antwerp from San Francisco or the same wheat and for the corresponding period. The rate per ton in 1880-81 as $18.25; in 1898-99 it was $6.50 per ton. This is a decline of about 64 per cent. ut in another way, 19 years ago the transportation of a bushel of wheat from an Francisco to Liverpool by water added 55 cents to the cost at San Francisco; -day a quicker service is done for 19¼ cents. The fall in this, the principal part f the distributive expenses, is equal to 64 per cent, while the price at the primary arket on the Pacific coast has remained practically the same. The producer as gained, but the foreign consumer is the chief beneficiary of this reduction rom 55 to 19¼ cents in freight.

From these facts it is evident that a decreasing proportion of the value at seaoard on the Pacific goes to the distributive agencies. The reason is that capital ompetes more freely upon the seas than anywhere else. It is also evident that the roducer gets an increasing proportion of the total value to consumer. If we egard the foreign value of this as equal to the primary market price plus the sea reight, then in 1880-81 the primary market price was 56 per cent of the foreign alue; in 1898-99 it was 70 per cent of the value on board ship at Liverpool, Havre, r Antwerp. This measures the producer's share of gain from improved facilities nd reduced rates of transportation. It is small compared with the part that has one to the consumer—so small, indeed, that it is doubtful whether it would cover e increased cost of production.

4. FARM PRICES, FOREIGN PRICES, AND FREIGHT RATES.

There is still, or has lately been, a general feeling among producers that the system of distribution is so organized and operated as to tax the producer and consumer in the interest of the distributers. The distributing expenses, as previously stated, are composed of two classes of charges—the carrying and the commercial charges. We leave out of account the charges for storage or maintenance of quality.

We give below the farm prices of wheat in Illinois for a series of years, as furnished by the Department of Agriculture. The Illinois farm prices of wheat are presumably nearer to Chicago prices than those of other wheat-growing States. We then give the average prices of wheat in England for corresponding years. By comparing these two series of prices we get the difference, year by year, between the farm value of wheat in Illinois and the consumer's value in England. This series of differences in prices we then compare with the freight rates between Chicago and Liverpool, in cents per bushel. The result is that while in the earlier part of this period of 17 years (1880–1897) the difference between the farm value and the foreign value exceeded the freight considerably, in the greater portion of the period the contrary is the case.

Comparison of farm prices, foreign prices, and freight rates per bushel, 1881–1898.

Year.	Price of wheat in England.[1]	Farm price in Illinois.[2]	Difference.	Freight, Chicago to Liverpool.[1]	Year.	Price of wheat in England.[1]	Farm price in Illinois.[2]	Difference.	Freight, Chicago to Liverpool (per bushel).[1]
				Cents.					*Cents.*
1881	$1.37¾	$1.22	$0.15¾	22.31	1890	$0.95¼	$0.87	$0.08¼	19.12
1882	1.36⅞	.86	.50⅞	....	1891	1.11¼	.85	.26½	24.45
1883	1.26¼	.92	.34¼	21.88	1892	.91	.63	.28	19.72
1884	1.08⅝	.63	.45⅝	26.57	1893	.79	.51	.28	20.46
1885	.99¾	.81	.18¾	17.66	1894	.68¾	.45	.23¾	19.50
1886	.94⅝	.69	.25⅝	22.03	1895	.69¼	.53	.16¼	19.20
1887	.98⅜	.70	.28⅜	20.92	1896	.78¾	.74	.04¾	20.10
1888	.96⅜	.93	.03⅜	20.94	1897	.90¾	.89	.01¼	20.16
1889	.90⅛	.70	.20⅛	23.75	1898	....	.60	....	20.61

[1] Grain trade of the United States, January, 1900, p. 2066.
[2] Statistician's Report, Department of Agriculture, 1895, p. 69.

These freight rates from Chicago to Liverpool are probably higher than the actual rates at which the wheat was carried. Nevertheless, the figures given above suggest a tendency on the part of the difference between the farm prices and the prices at the foreign centers of consumption to approximate to the level of freight rates; that is, the difference between the farm value of wheat in Illinois, which is nearest to the Chicago price, and the value in England, which is the consumer's value there, tends to disappear altogether; or, in other words, in the cost of distribution speculative services and all other purely commercial services tend to be performed on a steadily narrowing margin, and the transport charges tend to make up a larger proportion of the difference between domestic and foreign prices of wheat. This corresponds with the fact that in the leading grain-dealing centers the commercial charges tend to decrease, partly because there is greater concentration and fewer firms, partly because keen competition among dealers has eliminated the less capable ones, leaving the field for export trade to relatively fewer firms, but mainly because the smaller number of firms now do a larger volume of business at a lower rate, but with a greater net profit than if the same volume were divided up among five times as many firms.

If the physical services of transportation, as seems to be the case here, tend to absorb a growing proportion of the difference between producer's and consumer's values, then labor and machinery (railroads, steamships, elevators, and the labor employed thereon) are (1) the residuary beneficiaries of the main tendencies in the distributive system, along with (2) the foreign consumer and (3) the producer.

A comparison of averages bears out this assumption. The average difference between the Illinois price and the English price for 1881–1890 was 24.87 cents per bushel; for 1888–1897 the difference was 16.02 cents. This indicates a diminishing difference. But a comparison of freight rates shows that during the former period rates averaged 21.70 cents, but during the latter 20.74 cents; that is, the average freight rate is quite constant, and any considerable reduction in the cost of distribution seems, therefore, to have fallen upon commercial agencies.

What proportion of the wholesale price at Chicago has it cost to get our wheat surplus from Chicago to Liverpool?

In a rough way this can be answered. The wholesale price at Chicago about December 1 is, approximately, equivalent to the farm price paid the producer plus freight to Chicago. The average yearly wholesale price at Chicago may be very different. It may be higher or lower than the December price.

Whatever the difference may be between the December price and the yearly average price, it is still true that the yearly average holds good, aproximately, as an index of the level of prices for that year. On this basis we have made the following comparison of yearly prices of wheat at Chicago from 1880 to 1898, inclusive, with the freight rates on that commodity from Chicago to Liverpool for the corresponding years:

Per cent of Chicago price of wheat required to transport same from Chicago to Liverpool.

Year.	Chicago price.	Freight to Liverpool (cents per bushel).[1]	Freight in per cent of Chicago price.	Year.	Chicago price.	Freight to Liverpool (cents per bushel).[1]	Freight in per cent of Chicago price.
1881	$1.152	22.31	19.3	1890	$0.895	19.12	21.2
1882	1.18			1891	.97	24.45	25.2
1883	1.017	21.88	21.5	1892	.793	19.72	24.6
1884	.827	26.57	32.1	1893	.678	20.46	30.2
1885	.837	17.66	21.1	1894	.571	19.50	34.1
1886	.765	22.03	28.8	1895	.625	19.20	30.7
1887	.755	20.92	27.7	1896	.625	20.10	32.1
1888	.907	20.94	23	1897	.857	20.16	23.9
1889	.865	23.75	27.2	1898	[2].735	20.61	28

[1] Per bushel by rail to seaboard and thence by steamer.

[2] Price of 1898 exceptional on account of Leiter "corner," hence the average for the six months, July-December, is taken.

The proportion of the price that goes for freight charge tends to increase as the price falls. The price of wheat has declined, hence the per cent of the price required for freight alone tends to increase. Hence the producer's proportion is reduced with the increase of the proportion that goes for freight.

The percentage of the consumer's cost of wheat that goes to farm price, to freight to primary market (Chicago), and to foreign carriage (Liverpool) is shown in the following calculation:

	1884.	1889.	1894.	1897.
Farm prices	$0.645	$0.698	$0.491	$0.763
Cost of concentration at Chicago	.182	.167	.080	.019
Chicago to Liverpool (by rail to New York)	.265	.237	.95	.20
Total cost to consumer, including freight from farm to foreign market	1.092	1.102	.766	1.012
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
(1) Proportion of farm price to total cost	58.9	63.3	64.1	75.2
(2) Proportion of cost of concentration at Chicago to total cost	16.7	15.1	10.4	4.8
(3) Proportion of freight, Chicago to Liverpool, to total cost	24.2	21.5	25.4	20

Comparison of farm prices and export prices of wheat, 1879-1898.[1]

Year.	Average export price.	Average farm price (Minnesota).	Difference.	Year.	Average export price.	Average farm price (Minnesota).	Difference.
			Cents.				*Cents.*
1881-82	$1.19	$1.06	13	1890-91	$0.933	$0.81	12.3
1882-83	1.13	.82	31	1891-92	1.03	.78	25
1883-84	1.07	.80	27	1892-93	.80	.61	19
1884-85	.862	.50	36.2	1893-94	.672	.51	16.2
1885-86	.87	.70	17	1894-95	.576	[2].49	8.6
1886-87	.89	.61	28	1895-96	.654	.44	21.4
1887-88	.853	.59	26.3	1896-97	.753	.68	7.3
1888-89	.897	.92	2.3	1897-98	.983	.77	21.3
1889-90	.832	.71	12.2				

[1] Statistician's Report, Department of Agriculture, 1895, pp. 69 to 93-94.

[2] Yearbook, Department of Agriculture, 1898, p. 692, from 1894-95 to 1898-99.

The difference between farm prices and export prices tends to diminish, as one might expect, owing to increased efficiency in transportation from farm to seaboard.

FARM PRICES AND LIVERPOOL PRICES COMPARED.

One other standpoint remains to be considered—that of the foreign consumer in his relation to American farm prices. A comparison of farm prices, of a particular kind of wheat, with the price which the foreign miller has to pay gives us the gross difference between what the producer gets and what the consumer pays. The average Liverpool prices for Kansas wheat (red winter) on the 1st of December for a series of years, 1882–1898, inclusive, are given below.

Year.	Liverpool price Kansas wheat December 1, per bushel.*a*	Farm price Kansas wheat December 1, per bushel.*b*	Gross difference between Liverpool and Kansas prices, per bushel.	Year.	Liverpool price Kansas wheat December 1, per bushel.*a*	Farm price Kansas wheat December 1, per bushel.*b*	Gross difference between Liverpool and Kansas prices, per bushel.
	Cents.	*Cents.*	*Cents.*		*Cents.*	*Cents.*	*Cents.*
1882	128.4	67	61.4	1891	123.6	73	50.6
1883	128.4	78	50.4	1892	86.4	52	34.4
1884	105	45	60	1893	78.6	42	36.6
1885	109.8	65	44.8	1894	76.2	44	32.2
1886	112.2	58	54.2	1895	78.6	45	33.6
1887	105	61	44	1896	102.6	63	39.6
1888	120	88	32	1897	111	71	37
1889	101.4	55	46.4	1898	90.6	50	40.6
1890	109.8	77	32.8				

a These figures have been reduced to American equivalents from quotations furnished by Mr. George J. S. Broomhall, of the Liverpool Corn Trade News, through the kindness of Mr. Frank Greene, editor of Bradstreet's, New York.

b Farm prices are taken from the Year Book of the United States Department of Agriculture.

The average difference between the Liverpool price and the Kansas price for the 6 years 1893–1898, inclusive, was 36.6 cents per bushel. As a matter of fact, that is just about equal to the railway and water rate through from the Kansas wheat fields to the Liverpool market by way of Chicago. The rate from Kansas and Nebraska to Chicago on wheat is on the average 15 cents per bushel (Beatrice, Nebr., to Chicago is 14.7 cents), and the rate from Chicago to Liverpool has been 20 on the average for the past 6 years up to 1899—that is, 35 cents covers freight through from producer to consumer, leaving the margin of 1.6 cents for other expenses. Thus nearly the whole difference between the farm price and the Liverpool price is accounted for in freight. Commercial charges are relatively light.

5. FARM PRICES AND OCEAN RATES OF WHEAT.

The tendency of ocean rates compared with farm prices for 14 years, from 1885 to 1898, is an instructive phase of this question. It appears that ocean rates on wheat declined most between the years 1880 and 1885. That was the period of violent competition and of rapid increase of carrying capacity between Europe and the United States. With 1885 these unsettled conditions had become more stable, and a new period began during which ocean rates were maintained fairly well throughout each year, except at times when rail-rate disturbances extended to the steamship companies. On the whole, however, the December ocean rates from New York to Liverpool on wheat from 1885 to 1898 represent the tendency which has pervaded the movement of wheat from domestic to foreign seaports.

The rates as given below are from the Treasury's summary of January, 1900, in the account of the grain trade of the United States.

Freight rates on wheat from New York to Liverpool, 1880–1898.

[In cents per bushel.]

Year.	January.	February.	March.	April.	May.	June.
1880	7	7.62	12	11.90	9	10.12
1885	9.30	5.32	7.30	8.38	5.60	5
1890	11.13	10.75	8	4	4.13	4.75
1891	7.25	4.75	3	3	3.25	4
1892	9	6.38	7.50	3.75	4.88	4
1893	3	3.25	2.75	2.63	3.75	5.88
1894	6.25	4.75	4.63	4.25	2.38	3.50
1895	3.38	3.88	4.37	3.88	3.50	2.25
1896	6.12	4.50	3.25	3.88	4.12	4
1897	5.88	5.25	5.25	4.48	3.38	3.78
1898	6.50	6.25	6.63	7.50	8.75	5.38

Freight rates on wheat from New York to Liverpool, 1880–1898—Continued.

[In cents per bushel.]

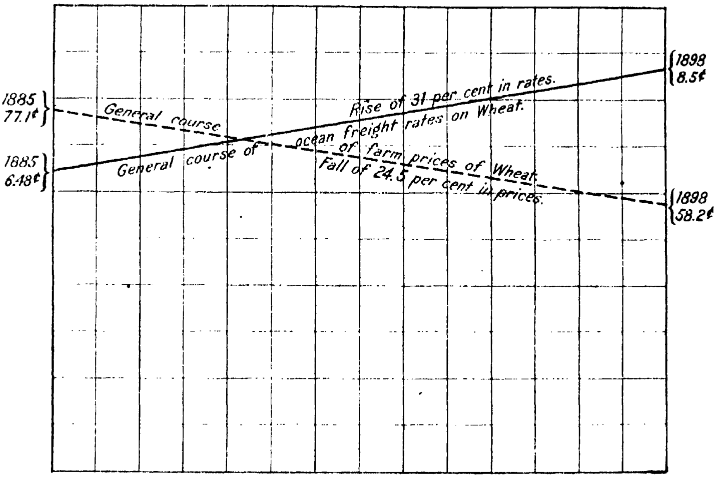
Year.	July.	August.	September.	October.	November.	December.
1880	14.60	14.76	11.38	12.30	15.12	14.62
1885	4.76	5.30	7.72	5.70	5.12	6.48
1890	4.25	2	1.38	.38	4.50	5
1891	4	6	8.63	11.13	11.50	8.75
1892	5.50	4.25	4	6	4.88	....
1893	6.50	7.13	4.38	5.25	6	5.88
1894	2.88	1.63	1.75	2.25	5.63	5.88
1895	3.25	3.88	4.75	5.62	6.62	6.38
1896	4	5.25	8	9.88	10.38	7.12
1897	5.88	6.63	7.50	9	8.75	8
898	3.38	4	6.38	9.38	10.50	8.50

On this basis of the December (1885) rate of 6.48 cents per bushel, we find that for 3 other years the rate was considerably lower than this. For 1 year (1895) it was a trifle lower, and for the other 4 years it was decidedly higher than the rate of 1885.

The tendency in ocean rates appears to have been upward rather than downward during this period.

Comparing this trend of rates on wheat with the trend of farm prices of wheat, we note an opposite movement in wheat prices. From 1885 to 1898 the tendency of farm prices of wheat has been in the long run decidedly downward. In 10 out of these 14 years the price, December 1, was below that of 1885, when it was 77.1 cents per bushel. In 4 of these 14 years the price was above that of 1885.

The following diagram lays these two tendencies side by side for comparison.



The simple truth they convey is this: From 1885 to 1898 the general course of farm prices of wheat in the United States was more or less steadily downward toward a lower and lower level, while on the contrary the course of ocean freights on wheat for New York to Liverpool, though declining at first, on the whole shows a tendency toward recovery, and in more recent years to rise toward a higher level of charges than prevailed in 1885.

The net results, as shown in the diagram, is that the prices in question have fallen 24.5 per cent, and that the rates in question have risen 31 per cent.

VII.—THE FINANCIERING OF THE GRAIN MOVEMENT, PAST AND PRESENT.[1]

The banker in a western reserve city is now scarcely called upon at all to supply capital with which to move the grain crops. Broadly speaking, the country, meaning by that term the chief grain-growing region, excluding the reserve cities, now has enough capital of its own to move the cereals from first hands and to start them well along in commercial channels. Whereas formerly the country was a borrower to a large extent in the city, beginning with the time the grain started moving from producers' hands and continuing until the bulk of that proportion of the crop which is sold into commercial channels was out of first hands, recently—especially in the last 2 years—the country has scarcely borrowed a dollar in the city for this primary grain movement. This financial independence of the country is due first and principally to a great accumulation of capital of late in the chief grain-growing regions. A secondary cause is to be found in the improved machinery with which the crop movement is accomplished, this consisting in greater efficacy of transportation lines, notably lower freight rates and a higher organization of the grain-handling interests, so that now, in many instances, one single agency takes the grain from first hands and carries it through to Europe or to the mill.

1. THE FINANCIAL SIDE OF THE CROP MOVEMENT.

The financial side of the crop movement, in its simplest terms, is this: A is the "elevator man" or warehouse man at a country town. When wheat begins coming in from the farms after harvest he buys it and puts it in his warehouse, paying for it with his own capital. The moment the grain is in his warehouse it becomes a tiptop cash collateral on which he can borrow close up to the cost price from the country banker, giving the banker warehouse receipts on the grain as security. When a quantity of wheat has accumulated in the warehouse A begins shipping it to his commission man in Chicago, say. When a car is loaded A draws a sight draft on the commission house for an amount fairly well up to the cost of the grain, attaches the bill of lading, and deposits the draft in the country bank, receiving credit for it as a cash item.

The country banker treats the draft as a cash item, sending it through to his Chicago correspondent, who collects and gives him credit for it. The wheat goes into a warehouse in Chicago and is again available for a loan well up to the market price. If the Chicago factor sells it for export, his draft against the shipment, with bills of lading attached, is taken by his banker as cash at current rates of exchange, the rates, of course, including interest on the money until the draft is paid at Liverpool or Antwerp or wherever the grain is consigned. This is the elemental form of a transaction which is varied almost endlessly in details. The important fact is that the grain is a cash collateral in every position which will permit of its being insured and of its ownership being represented by some regular negotiable instrument, such as a warehouse receipt or bill of lading. Sometimes with a very small capital A will handle a very large amount of grain, shipping it out daily as fast as he takes it in and drawing against the shipments, his own capital representing simply the comparatively narrow margin between the cost price and the loan or credit price. The capital of A's banker also goes far when the grain is handled rapidly. A draws checks on the bank for the grain he buys. The banker cashes the checks for the grain during the day and at night remits A's sight drafts, as cash items for credit, to his correspondent at Omaha, St. Paul, or Chicago, and at the same time orders a consignment of currency shipped to him. But much of the money paid by A for grain is not withdrawn from the bank, or, if withdrawn, immediately returns. The farmer deposits the check or uses it to pay a note held by the bank or to pay bills due the town merchants, who in turn deposit at the bank. There is no break in the chain. The time when money begins to move from the city to the country to pay for grain is, as a matter of course, exactly the time when money begins to be more plentiful in the country, when bills and notes are paid and deposits begin to increase in the country bank, at least in so far as the movement of deposits is governed by the crop movement.

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[1] Prepared by Mr. Will Payne, financial editor of the Chicago Economist.

2. BANK DEPOSITS AND CROP VALUES.

The crop movement now makes much less impression upon finance than formerly, because the banking power of the country has increased vastly more rapidly than the demand upon it in this particular line. There has been no increase in cereal production in the United States in 20 years—that is, as measured in value. There appears to have been a permanent increase in the production of corn in the last 5 years. There does not appear to have been a permanent increase in the production of the small grains, and a decline in price has offset the increased corn production. The best measure of the value of the cereal crops is doubtless the average farm price reported by the Department of Agriculture. The best indication of the banking power of the country is probably to be found in the individual deposits held by national banks, as reported by the Comptroller of the Currency. The following table shows the average value of the crops of wheat, corn, and oats in the United States in 5-year periods covering the last 20 years, and the average individual deposits of the national banks in the same series of years, both in millions of dollars:

	1880–1884.	1885–1889.	1890–1894.	1895–1899.
Wheat	418	325	322	338
Corn	704	633	676	548
Oats	175	187	213	162
Total	1,297	1,145	1,211	1,048
Deposits	1,032	1,302	1,638	1,951

The task of moving the crops is no greater now than 20 years ago. Meantime the banking power has at least doubled The Comptroller's last report showed that national banks in the United States had assets aggregating about 48 per cent the total of all banks, and in the chief grain States the proportion was about 50 per cent. The State and private banks together have probably shown about as large an increase in deposits in 20 years as the national banks.

From 60 to 65 per cent of all the wheat and corn in the United States is raised in 12 central Western States. In these States is produced nearly all that surplus which finds its way into general commercial channels, and it is in these States that the demand for money for crop moving is most felt. The chief wheat States are Minnesota, the Dakotas, Wisconsin, Michigan, Ohio, Indiana, Illinois, Iowa, Nebraska, Kansas, and Missouri. Of these, Ohio, Indiana, Illinois, Iowa, Missouri, Kansas, and Nebraska are the chief corn States. The following table shows the production, amount sold by the farmer to March 1 following the harvest given, with estimated values based on the Agricultural Department's average farm price for the United States:

Wheat crop in 12 Western States of chief production, with values, amount remaining on the farm March 1, and amount sold off the farm from harvest to March 1, in millions of bushels and millions of dollars.

Year.	Crop.	Value.	On farm Mar. 1.	Value of same.	Sold off the farm.	Value of same.
1890	268	222	74	61	194	161
1891	440	369	132	110	308	259
1892	365	228	97	61	268	167
1893	252	136	67	36	185	99
1894	320	157	52	25	268	132
1895	321	163	88	45	233	119
1896	278	202	61	45	216	157
1897	326	263	73	59	253	205
1898	460	267	135	78	324	188
1899	348	203	100	58	247	144

Corn crop in seven Western States of chief production, with values in millions of dollars.

Year.	Crop.	Value.	On farm Mar. 1.	Value of same.	Sold off the farm.	Value of same.
1890	861	435	290	147	570	288
1891	1,316	534	546	222	770	313
1892	1,008	396	380	149	628	247
1893	1,017	371	360	131	656	240
1894	591	270	207	94	384	175
1895	1,336	352	686	181	650	172
1896	1,586	341	861	185	725	156
1897	1,237	325	516	135	722	190
1898	1,133	325	450	129	683	196
1899	1,355	410	494	150	861	2[illegible]

Below will be found the combined values of the wheat and corn crops as estimated above, in millions of dollars, the value of that portion of the crops sold off the farm up to March 1, and the individual deposits in national banks in the 12 States under consideration:

Year.	Value wheat and corn.	Value portion sold off farm.	Individual deposits in national banks.	Year.	Value wheat and corn.	Value portion sold off farm.	Individual deposits in national banks.
1890	658	450	442	1895	516	290	463
1891	904	571	459	1896	543	313	425
1892	624	414	522	1897	589	395	495
1893	507	339	401	1898	593	385	569
1894	427	307	462	1899	614	405	696

3. INCREASE OF RURAL BANKING POWER.

So it may be said, in a very rough way, that the banking power of the chief grain States was to the crop movement 10 years ago as 4 to 6, and is now as 7 to 6. But of the amount of wheat sold off the farm only about 60 per cent, roughly speaking, finds its way into general commercial channels. This is shown by a comparison with the receipts of wheat at Western primary markets. The following shows the amount of wheat sold off the farm to March 1 in Western States of chief production, as given above, and the receipts of wheat at Western primary markets from July 1 to March 1 in the same crop years; also primary receipts for the full crop years ending June 30, and for the first half or the 6 months ending December 31, all in millions of bushels:

Year.	Sold off farm to Mar. 1.	Primary receipts to Mar. 1.	Primary receipts July 1 to June 30.	Primary receipts July 1 to Dec. 31.
1890-91	194	89	119	76
1891-92	308	199	251	173
1892-93	268	220	265	191
1893-94	185	135	162	118
1894-95	268	127	154	116
1895-96	233	161	199	136
1896-97	216	137	171	123
1897-98	253	186	232	168
1898-99	324	215	273	181
1899-1900	247	166	....	140

The bulk of the small grain, therefore, comes to market in the first half of the crop year, or between the beginning of July and the end of December. The movement, in fact, ordinarily reaches its maximum volume in October and November, but by that time the country has been filled up with money, brought in for the earlier movement, and the demands upon the centers for currency commonly begin to slacken, or, perhaps, by December, cease altogether. The movement of corn to primary markets runs more evenly through the year and is less important—in fact, from the point of view of this inquiry, is scarcely important at all, because, being a comparatively smaller and steadier movement, it involves no exceptional demands upon the centers at certain seasons. Western primary receipts of corn in the 12 months ending November 1, the corn crop year, have been 230, 212, and 199 million bushels, respectively, in the last 3 years. Taking the Agricultural Department's average farm price as the measure of value, Western primary receipts of wheat and of corn in the 6 months ending December 31 have been as follows, in millions of dollars:

	July 1 to Dec. 31—			
	1896.	1897.	1898.	1899.
Value, wheat	88	131	106	82
Value, corn	25	27	36	27
Both	113	158	142	109

Perhaps this is in a general way near enough to a monetary measure of the thing commonly called the Western crop movement, the value of the other small grains being inconsiderable as compared with wheat. This, of course, indicates the employment, first and last during the 6 months, of a large amount of capital; but, as heretofore pointed out, the capital may turn rapidly, and in any event the employment of capital in the crop movement is so inextricably blent with its employment in many other ways, and the crop movement, even in the Western States of chief production, is so small a part of the whole that of late it has often been impossible to trace the effects of the crop movement in the general financial situation. For example, in 1897 and 1898, although crops were large and in 1897 unusually high prices were realized and the movement to primary markets was on a fairly liberal scale, still the employment of capital in moving the crops had no appreciable effect upon the money market at Chicago in the 6 months ending December 31. July, 1897, opened with call money at 3 to 3½ per cent. By the end of the month the rate had advanced nominally to 3½ and 4 per cent. By the middle of October it was 4 per cent, by the middle of November 3½ again, and by the middle of December 3 per cent. A careful review of the market during the 6 months makes one hesitate to attribute even this slight advance to the crop movement. July, 1898, opened with call money at 4 per cent. By the middle of July some special demand for funds in connection with subscriptions to the Government loan was noted, but at the beginning of August call money was again 4 per cent, the middle of that month 3½. The fore part of September, when there were some sharp fluctuations in New York, call loans were quoted 4½ per cent in Chicago, but by the 1st of October the rate was back at 4 per cent, where it continued to the latter part of December, when it was 3½ to 4 per cent.

In July, 1896, call money was 5 per cent, and fairly easy until the latter part of the month. Early in August the rate advanced to 5½ to 6 per cent. During the latter part of August and all through September and October money was tight at 6 to 7 per cent, and it was only in December that call money got back to 5 per cent. But the money market in this period was very plainly governed by conditions absolutely apart from the crop movement, the situation in August (at the height of the Presidential campaign) being almost panicky. In fact, as shown above, the wheat movement in 1896 was notably smaller than in the two succeeding years, and the visible supply of wheat as reported by the Chicago Board of Trade increased only 7,000,000 bushels from July 4 to December 12. In 1899 a decided hardening of the money market was exactly coincident with the crop movement, and the employment of capital in that movement undoubtedly affected the money market. July, in that year, opened with call money at 4 per cent; by the middle of September it advanced to 5 per cent and by the middle of October to 6 per cent, where it stood to the end of the calendar year. Now reference to the tables above will show that the crop movement in the 6 months of 1899, measured in value, was much smaller than in the two preceding years, and that the banking power of the West as indicated by individual deposits in national banks was much greater than in the two preceding years. Yet the crop movement in 1899 affected the money market strongly, while it affected that market scarcely at all in 1897 and 1898. The obvious reason is that in 1899 the volume of business generally had grown to be much larger than in 1897 or 1898, consequently employing much more capital, and that, therefore, the comparatively slight additional employment of capital in connection with the crop movement affected rates.

It would of course be absurd to say that the difference in money rates, as shown above, was a measure of the demand in connection with the crop movement, for all the other causes which had been putting capital to a greater use were in full and increasing operation during the crop movement. The above is, perhaps, sufficient to show the impossibility of accurately tracing the effect of the crop movement on the financial side. Even in the grain-growing country (outside of the cities) the other factors which make for or against plentifulness of capital keep overrunning the crop factor. As an instance the following table is given, showing the individual deposits held by national banks, exclusive of those in reserve cities, in the States and on the dates named, in thousands of dollars:

States.	December, 1896.	July, 1897.	December, 1897.	July, 1898.	December, 1898.	July, 1899.	December, 1899.
Illinois	38,176	44,401	47,222	54,524	55,935	65,080	66,336
Indiana	30,623	32,382	36,144	41,627	44,748	40,838	43,685
Iowa	21,435	23,258	26,965	29,400	31,500	37,779	40,752
Kansas	16,039	16,986	19,696	21,243	21,465	23,855	24,755
Minnesota	13,980	14,939	16,431	17,242	17,542	19,996	22,166
Nebraska	7,939	9,265	10,634	12,999	14,143	16,640	16,373
North Dakota	4,417	4,003	5,848	4,543	5,591	4,820	6,225
South Dakota	3,914	3,680	4,178	4,059	4,593	5,104	5,770
Total	136,523	148,914	167,118	185,647	195,517	214,112	226,062

The bank statistics of the reserve cities of the States named above—namely, Chicago, Indianapolis, Des Moines, Minneapolis, St. Paul, Lincoln, and Omaha—which are excluded from the above table, show that there is no certain fluctuation in country-bank balances corresponding to withdrawal of funds for the crop movement. For example, the following, giving the amount due to State and national banks by the national banks of Chicago on the dates named last:

December, 1896	$53,112,000	December, 1898	$93,919,000
March, 1897	58,666,000	April, 1899	102,354,000
July, 1897	67,629,000	July, 1899	109,327,000
December, 1897	73,225,000	December, 1899	92,781,000
February, 1898	83,436,000	April, 1900	106,487,000
July, 1898	85,217,000		

4. ACCUMULATION OF RURAL CAPITAL IN GRAIN STATES.

The rapid accumulation of capital in the chief grain-growing States in the last 3 years, shown above, is no doubt due in good part to very good crops and fairly good prices. There is no doubt that an unusually large proportion of the money received from the grain has, of late, remained in producers' hands. But here again one finds it impossible to separate the crop from the other factors which make for or against prosperity. Referring to the 10-year series of crops in the table above, and accepting the Agricultural Department's basis of value as tolerably accurate, it will be found that no other three consecutive years in the series show such large production as do the years 1890-1891-1892. Yet that series of years immediately preceded a period of great depression. At harvest time, 1890, the individual bank deposits in the 12 Western States stood at 441 million dollars. In 1890, 1891, and 1892 there was raised in these States 2,186 million dollars' worth of corn and wheat, and at the end of the series—that is, at harvest time, 1893—bank deposits had fallen to 401 million dollars. At harvest time 1896 bank deposits were 425 million dollars. The value of the three succeeding crops of corn and wheat was 1,795 million dollars (400 million dollars less than in the first series), and at harvest time in 1899 bank deposits had increased to 696 million dollars. These comparisons would be even more striking if statistics of the State and private banks were included. One important fact which suggests itself is that an average selling price does not give the real value of a corn crop. It has been shown that only about 10 per cent of that crop comes to primary markets, and a great part of the remainder is manufactured into meat on the farm or in the neighborhood. For the last 5 years the average annual production of corn has been about 2,000 million bushels. The Cincinnati Price Current gives the following as the number of cattle and sheep slaughtered at Chicago, Kansas City, St. Louis, and Omaha, and of hogs packed at all Western points in the years named:

	Cattle.	Sheep.	Hogs.	Total.
1890	3,373,000	1,622,000	16,980,000	21,975,000
1891	3,356,000	1,879,000	15,180,000	20,415,000
1892	3,911,000	2,112,000	13,750,000	19,773,000
1893	4,104,000	3,278,000	11,080,000	18,462,000
1894	3,959,000	3,565,000	15,265,000	22,789,000
1895	3,590,000	3,995,000	15,285,000	22,870,000
1896	3,627,000	4,299,000	16,230,000	24,156,000
1897	3,711,000	4,654,000	19,640,000	28,005,000
1898	3,553,000	4,647,000	23,510,000	31,710,000
1899	3,786,000	5,019,000	22,215,000	31,020,000

This no doubts helps to account for the larger amount of capital in the Western grain States. By way of suggesting the relative importance of grain to other interests the following table has been compiled, showing the relation between grain and other commodities moved on three representative Western railroads:

	Chicago, Milwaukee and St. Paul.		Chicago, Rock Island and Pacific.		Atchison, Topeka and Santa Fe.	
	Tons.	Per cent.	Tons.	Per cent.	Tons.	Per cent.
Wheat	1,597,436	10.09	484,265	5.91	729,912	10.38
Other grain and flour	2,737,555	17.29	1,437,508	17.55	627,927	8.89
All grain and flour	4,334,991	27.38	1,921,773	23.46	1,357,839	19.27
Lumber and forest products	3,167,851	20.01	557,926	6.81	380,167	5.39
Coal	1,737,157	10.97	1,908,249	23.29	1,842,218	26.10
Live stock, provisions	1,154,118	7.29	796,815	9.10	910,394	12.90
Total freight	15,830,156	100.00	8,193,409	100.00	7,056,351	100.00

These figures are from the last annual reports. About 90 per cent of the coal hauled on the Rock Island and Atchison roads was soft coal—a Western product. The Atchison figures are for the Atchison, Topeka and Santa Fe proper, which runs largely through a grain country, and not for the "system."

It has been suggested that the movement of crops now imposes a smaller task upon capital than formerly, largely because there is more capital, but partly because of improved facilities. One improvement is in transportation facilities. While the railroad mileage in the chief grain States has not been increased to any important extent in the last 7 years, the efficacy of the roads has been increased, so that 1 mile of road will do more work than 7 or 8 years ago. This has come about through heavier construction, more powerful locomotives, heavier average train loads, fuller equipment, etc. There has been a like improvement in water transportation. Grain can now be moved more rapidly than formerly, if necessary. This of course decreases the demand upon capital. The amount of capital necessary for transportation charges is much less than formerly. On that point the following table prepared by the Department of Agriculture is as good evidence as any:

The east-bound movement of wheat from Chicago and the freight-rate charges between Chicago and New York for the years 1870 to 1898, inclusive.

Years.	Bushels.					Average rate, in cents per bushel.[1]		
	By lake.	Percentage.	By rail.	Percentage.	Total.	By lake and canal.[2]	By lake and rail.	By all rail.
1870	13,429,069	83.67	2,621,699	16.33	16,050,768	14.89	19.15	28.98
1871	12,120,923	95.46	576,648	4.54	12,697,571	18.12	22.38	27.75
1872	8,831,870	78.89	2,363,810	21.11	11,195,680	21.77	24.91	29.80
1873	15,528,984	65.58	8,149,209	34.42	23,678,193	16.86	23.64	29.17
1874	16,974,149	63.57	9,725,251	36.43	26,699,400	12.68	15.20	25.81
1875	16,061,054	72.94	5,956,609	27.06	22,017,663	9.95	12.71	20.97
1876	7,396,369	57.90	5,378,792	42.10	12,775,161	8.59	10.58	14.80
1877	10,345,983	77.77	2,957,250	22.23	13,303,233	10.73	15.08	19.37

[1] Rates from 1870 to 1879, inclusive, reduced from currency to their equivalents in gold.

[2] Including canal tolls until 1882, but not Buffalo transfer charges.

The east-bound movement of wheat from Chicago and the freight-rate charges between Chicago and New York for the years 1870 to 1898, inclusive—Continued.

Years.	Bushels.					Average rate, in cents per bushel.		
	By lake.	Percentage.	By rail.	Percentage.	Total.	By lake and canal.	By lake and rail.	By all rail.
1878	12,903,481	56.29	10,018,880	43.71	22,922,361	9.08	11.31	17.56
1879	17,622,796	59.03	12,232,323	40.97	29,855,119	11.60	13.30	17.30
1880	16,685,046	77.87	4,742,343	22.13	21,427,389	12.27	15.70	19.90
1881	7,688,072	49.87	7,728,124	50.13	15,416,196	8.19	10.40	14.40
1882	14,944,258	83.65	2,920,526	16.35	17,864,784	7.89	10.90	14.60
1883	7,067,657	72.39	2,696,071	27.61	9,763,728	8.37	11.50	16.50
1884	11,518,884	64.56	6,322,493	35.44	17,841,377	6.31	9.95	13.125
1885	5,436,461	49.73	5,496,544	50.27	10,933,005	5.87	9.02	14
1886	10,513,126	81.02	2,462,918	18.98	12,976,044	8.71	12	16.50
1887	17,313,351	71.52	6,893,504	28.48	24,206,855	8.51	12	15.74
1888	5,895,379	59.58	3,998,998	40.42	9,894,377	5.93	11	14.50
1889	10,330,675	68.21	4,814,978	31.79	15,145,653	6.89	8.70	15
1890	6,965,834	70.32	2,953,826	29.68	9,919,660	5.85	8.50	14.31
1891	31,102,888	85.04	5,470,333	14.96	36,573,221	5.96	8.53	15
1892	33,498,547	83.14	6,792,284	16.86	40,290,831	5.61	7.55	14.23
1893	19,720,775	88.28	2,618,327	11.72	22,339,102	6.33	8.44	14.70
1894	15,016,804	94.11	940,202	5.89	15,957,006	4.44	7	12.88
1895	13,258,440	70.06	5,666,997	29.94	18,925,437	4.11	6.95	12.17
1896	13,232,818	57.34	9,845,117	42.66	23,077,935	5.38	7.32	12
1897	18,449,628	77	5,511,774	23	23,961,402	4.35	7.37	12.32
1898	26,594,263	72.29	10,194,965	27.71	36,789,228	4.42	4.96	11.55

• It may be added that in the matter of the movement of currency between Chicago and the country, while exact statistics are not available for any extended period, enough information is at hand to demonstrate that, as in other effects of the crop movement upon monetary affairs, no rule can be laid down, and the other factors in the situation often overcome the influence of the crop movement. For example, the heaviest shipments of currency to the country in any month for at least more than 2 years occurred in September, 1899, when the amount of currency sent to the country from Chicago may be roughly estimated at $15,000,000 to $20,000,000. This may be attributed to the crop movement. But in September, 1898, when Western receipts of wheat were about the same as in 1899, currency shipments were light, probably not over 50 per cent as heavy as in 1899. Again shipments of currency to the country in February and March this year, when the crop movement is supposed to be about over, were about the same as in October and November last.

PART THIRD.

COTTON IN COMMERCIAL DISTRIBUTION.

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INTRODUCTION—THE COMMERCIAL POSITION OF COTTON PRODUCTION.

In none of our staple crops has there been so great a fall of prices as in that of cotton, from 1872 down to 1894, when a figure not far from the bottom level was reached. General commodities, according to Sir Guilford Molesworth, fell during this period of 22 years fully half their value. Wheat prices fell still more and cotton most of all. The following figures show the relative decline in prices of general commodities and wheat and cotton from 1872 to 1894:[1]

	Per cent.
General commodities	50
Wheat	60
Cotton	70

During the early part of the period the Southern States were passing through a most trying ordeal of political reconstruction, but the political was in no way to be compared with the economic reconstruction that the phenomenal fall in the price of cotton imposed upon their agriculture. In fact, the process resulting from the pressure of lowering prices of cotton was destructive rather than reconstructive in its effects upon capital and labor employed upon land.

The level of prices, it will be noticed by the diagram following, declined more rapidly than the rate of production increased, so that generally speaking the larger the crop the greater the catastrophe to the producer in lower rewards for his labor and in higher rates of interest for all capital of which he could get the use.

Another feature of cotton prices has affected the general situation of the producer. They are subject to such fluctuations as to make production itself much more of a speculative venture than is the case with grain growing, stock raising, or almost any other form of farming. The table of closing quotations on middling upland for a series of years illustrates the speculative character of the market prices of cotton regarded as a basis for investment on the part of the producer and all directly involved, whether they be laborers, landlord, tenant, merchants, or bankers.

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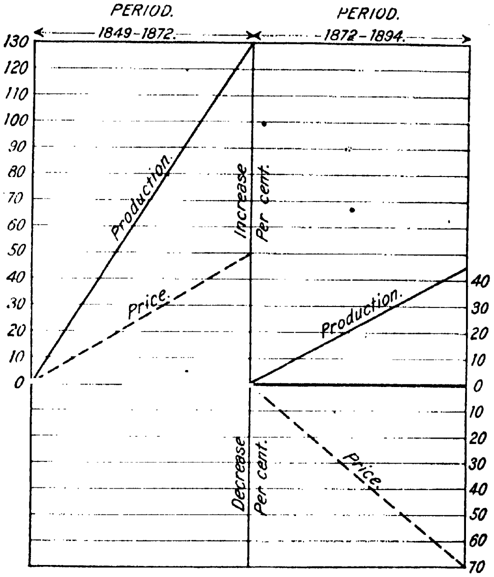
[1] Royal Commission on British Agriculture, Final Report, 1897, p. 194.

If a given outlay of economic resources yields 8-cent cotton one year and 5-cent cotton the next, under existing conditions of cotton production the producer pays the risk. His borrowings at high rates of loan from bank and his buyings from the merchant show, by the premiums and prices paid, that neither of these is disposed to bear the brunt of price caprices. From this standpoint we wish to make some analysis of the thoroughly unsatisfactory situation of the producer while dependent primarily on the caprices of a foreign speculative market, and then to point out more clearly the influence of the rise of a near-by factory market upon the economic position of the producer of cotton.



I.—ECONOMIC ANALYSIS OF THE PRODUCTIVE SYSTEM.

1. LAND AS A FACTOR IN COTTON PRODUCTION.

The general cotton situation, from the standpoint of the world's market, may be briefly described as follows: The world's annual supply is approximately 14,000,000 bales. Of this amount the United States produces 80 per cent. The 14 other producing countries yield the balance. The United States is therefore substantially master of the productive situation as far as raw cotton is concerned. Her only prospect of rivalry comes from four countries—India, Russia, Egypt, and Brazil. At present, however, these countries together yield only a small but growing proportion. We send 68 per cent of our raw cotton to foreign consumers. This relation of the United States to the cotton market is the first fact of primary importance.

The second fact is the continually downward trend of prices—excepting this year—to producers. Two commercial effects have followed from this—it has affected the internal organization of our productive system by bringing into cultivation the more favored tracts of land where production is carried on at a minimum of expense. This has increased the world's demand for our cotton for consumption. The half of our cotton is now made beyond the Mississippi River. The second effect of low prices has been the expansion of area under cotton cultivation by the use of fertilizers in the older eastern cotton territory. Both of these effects have also contributed generally to an average increase in yield per acre; but the general effect of low prices for the product upon foreign acreage has been to discourage expansion in some cases and to suspend cultivation to a great extent in others. The net result of falling prices upon the internal constitution of our cotton-producing system has been to prepare it more fully than ever for competition with the rest of the world in the open market.

But there are certain elements of economic weakness in the present constitution of this productive system, which will militate against the continued supremacy of the United States as long as they are allowed to remain. A critical analysis of the condition of production is thus necessary to show the bearing of production upon distribution. In cotton production, as in any other species of industrial enterprise, four economic factors are always required: Land, labor, capital, and managing ability. In the proportion in which each of these factors enter, each division of agricultural industry has its own peculiar constitution. The progress of each species depends on maintaining the right proportions of every factor in the farm economy. In stock raising, cotton growing, in cereal culture, and in dairying, a diversified farming, each of these factors plays a different rôle. In all of them, however, land is the basis. Private property in land lies at the bottom of prosperous agriculture. So far as land is a factor in production of cotton, we have no hesitation to say that the general disposition to increased ownership in land beyond capacity to cultivate it had been one of the greatest drawbacks upon this industry. In the first place, the rule has been to sink too great a proportion of the total capital investment in land, leaving too small a proportion of capital free for developments and improvement in the state of cultivation for fertilizers, drainage, and care of the crop. The planter or farmer who is "land-poor" is not in position to command sufficient labor or capital to do justice to the portion under cultivation, to say nothing of the portion not under cultivation, in which his working capital is locked up and earning nothing whatever. The bearing of this factor upon the market is simply this—that it has prevented the owner and cultivator alike from adapting the system to external changes; it has kept him in a groove, and left him no margin for experimentation as to the more advantageous direction of capital and labor on his land. The result has been that in 2 years enough cotton has been produced to suffice for 3 years' consumption. The undue proportion of capital sunk in useless land has therefore contributed largely to the inability of producers to do anything else but go on; and, going on, has, under falling prices, meant bankruptcy to altogether too many for the general prosperity. The entire system of production has been weakened by this feature of its economic constitution.

In the production of the cotton crop the system of land tenure is peculiar. Two types of tenure prevail under three different forms: That of cultivation by owners, that of lease to small tenantry, and that of the large estate, operated under a system of superintendence. Of these three systems, the experience of the Western nations seems to set its seal of approval upon the first, cultivation by owner, as the one whose economic constitution is calculated to yield the best results in the long run. Of this system the cotton belt has seen least in the older States and most in the newer ones, but it is still the least developed system of tenure of the three. In this form of tenure the factors of land, labor, capital, and management are combined in the same person—the proprietor and producer. The responsibility for the right use of the three agents of production centers in a single authority. There is no division of interests in organization. Under common control adjustment to change is free, and new departures are comparatively easy to enter upon. This form of tenure has in it a far greater degree of adaptability of farm policy to changes in the market, and therefore has a more commanding influence upon the course of prices. Sixty-nine per cent of the farms in the pine-level portion of the cotton belt are occupied and worked by their owners. The average of acres to the work animal is 37, as against 22 for the whole cotton belt. The product per work animal is 3 bales, while for the rest of the cotton belt, where other forms of tenure prevail, it is $2\frac{1}{10}$ bales. (The Cotton Plant, p. 227.)

2. THE PRODUCTIVE EFFICIENCY OF FARM LABOR.

The low efficiency of negro labor is one of the causes which puts the cotton crop at a disadvantage in the market. His is, however, no longer the only supply of labor available. His efficiency is much higher in other lines of enterprise than in cotton growing. In the manufacture of tobacco, in trades, in transportation, and in fruit growing[1] his efficiency is of a much better order. The cause of this difference is to be sought in the fact that in the system of cultivation generally in vogue the negro laborer has all the economic drawbacks that help to make labor inefficient. He is poorly fed, poorly housed, poorly paid, economically dependent, and well-nigh hopeless in his outlook upon the future for himself and his family. Naturally it is inevitable that an industry, dependent upon such labor, must suffer in the quality of the product; naturally, too, it would lay emphasis upon greater quantity rather than on superior quality of product. In the latter case wastefulness is common, owing to the great abundance of the staple.[1] The preparation for market is careless. The condition in which American cotton comes into commerce is, in fact, little short of reproachful.[2]

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[1] Industrial Commission, testimony of J. H. Hale, Agricultural Labor, pp. 376-377.

The testimony of those who have examined conditions most carefully agrees upon this point—that negro labor is defective in productive efficiency. Prof. M. B. Hammond, who has examined the facts at first hand with much scientific discrimination, expresses the judgment of observers generally. "We may look," says he, "at the question as to the efficiency of the negro labor for cotton culture from two standpoints. Is his labor as valuable as that of the white man under the same circumstances? Is his labor improving? The facts already mentioned seem to furnish a negative answer to both questions. Not only has there been an increase in the proportion of whites engaged in the cultivation of cotton, but a corresponding increase in the production of this staple has taken place in precisely those regions where the increase of white labor is most noticeable. Mr. Hoffman has pointed out the fact that in Mississippi, where the proportion of blacks to the white population has almost steadily increased since 1860, the production of cotton has actually shown a falling off, while in Texas, where the proportion of colored to the white population has decreased 15 per cent since 1860, the production of cotton is seven times as great as in the earlier year. The white farmers who cultivate the sea-island cotton in Georgia raise 3 or 4 times as much per acre as do the blacks who raise the same variety a little farther to the south, in Florida. These indications of the inferiority of the negro labor in cotton culture are confirmed by the statements of Southern planters from almost every portion of the cotton belt. The fact is further proven by the wages paid to colored labor, when these are compared with the wages received by white men employed in the same pursuits.

"The only exception to this general preference for white labor comes from the 'delta regions.' Here the negro is generally preferred to the white man for cotton cultivation. The preference, however, is not due to the greater efficiency of the black man, for here as elsewhere wages of white labor are higher. But the malaria in this region affects the negroes less than it does the whites, and negro labor is accordingly more steady and reliable. Negro labor is also much cheaper, for the negro's lower standard of living allows him to dispense with many things which seem indispensable to the white man. The latter demands a good house, stoves, and a diversified diet, while the negro seems content with a log cabin and a fireplace, and with corn, bacon, and molasses as articles of food."[3]

3. THE SCARCITY OF FREE FARM CAPITAL.

Capital within the area of production where cotton is the primary crop has until quite recently at least been peculiarly scarce. This is so much the case that even the planting, the cultivation, and the gathering of the crop have to be done largely on borrowed capital. Under these circumstances credit is low, interest is high, and the risk reduces still more the amount of capital that the producer can command per unit of product obtained. Under the circumstances it can not be otherwise than that farming should be a declining business.

Farming is here a speculation on future return to capital and labor on land: uncertainty is an important element in measuring the command over farm capital. Meager capital means inefficient labor, and inefficient labor is the most expensive labor. Under these conditions it does not pay anybody to put surplus capital into agriculture. There are, of course, plenty of exceptions, but enterprise is both undercapitalized and therefore undermanned in its present organization. Whenever that is the case, the economic resources of agriculture gradually exhaust themselves. Extensive methods of cultivation have to prevail as a necessity of the only organization which farming admits of—an organization in which land is cheap and efficient labor and active capital are too dear to be liberally employed in agricultural development.

This condition of things has long lain at the bottom of the commercial situation of the producer. Whereas normally the producer of cotton ought to be the most independent element in what constitutes the cotton market, actually he has been for the greater portion of the past ten or fifteen years the weakest factor in the entire situation. Possibly during a period of falling prices of any staple farm product this is inevitable, because the producer is naturally slower than the local buyer, the railroads, the speculator, or the manufacturer to adjust himself to the changes which a falling level of prices enforces upon all interests concerned.

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[1] The Cotton Plant, p. 246.

[2] Ibid., pp. 361-362.

[3] M. B. Hammond, The Cotton Industry, pp. 184-185.

In spite of this, however, the producer's want of free capital forces the crop into the hands of those who hold the visible supply, so soon after picking that all advantage of changes in price go to the commercial agencies with capital enough to hold the crop until the consumer must have it. The producer, therefore, not only loses an opportunity to get better prices—that is, to take his chances—but, by the very fact of loading down the markets from the beginning of one crop to the beginning of another with an unnecessarily large visible supply publicly known to consumers and traders, the producer unwittingly contributes to the prevalence of a lower level of prices even for those producers who do hold their cotton against a future rise in price. The deplorable lack of cash capital directly contributes to lower the prices of the entire cotton crop throughout the year.

Not only does this scarcity of cash capital affect unfavorably the level of prices at which the producer sells in the market, but it also increases the cost of production by reducing the efficiency of labor and capital upon the land. So that, other things being equal, the present constitution of the productive system in this particular respect tends both to press down the price and to push up the cost of production, making it increasingly difficult for producers to make ends meet. Nothing can be more certainly suicidal from the producer's standpoint. There are of course numerous exceptions; but, taken as a system, cotton production, as at present undercapitalized, has in it the seeds of economic dissolution.

These exceptions are to be looked for in the self-sufficing farm family cultivating its own land by its own labor and in the large-scale farming with a high degree of managing ability at its head. But even in the latter class the tendency to cover too large an acreage for the capital employed constantly threatens the efficiency of this system of production. In the self-sufficing farm family there is much larger possibility commanding capital by such diversification of production through live stock, dairying, and trucking on a small scale, thus giving the producer a more constant cash increase throughout the year, so that the system of production need not be the producer's worst enemy when he comes to market his cotton.

This is possibly the only safe way to prevent overproduction. The command of a more constant supply of cash capital by this gradual change in the productive system will put a rival system of cultivation into the field, by which the tendency to expansion in cotton acreage can alone be successfully curbed. With the undercapitalized system of cotton production expansion is inevitable, and every expansion of cotton acreage increases the rate at which existing capital under the present system is exhausted, unless occasionally relieved by higher prices for the product. Such relief, however, is exceptional. The rule has been just the opposite—toward lower prices. But the old system of production has not been reducing the cost of production at a corresponding rate. The only way by which the productive system has been able to keep going is by the continual westward movement to fresh lands, thus avoiding to some extent, but temporarily only, the otherwise inevitable rise in cost of production, due to an increasingly undercapitalized system of production and a consequent progressive exhaustion of the resources of the soil. If an acre produces increasingly less, more acres must be cultivated. If less capital must be spread out over more acres, the cultivation must be progressively more expensive per unit of product. Between the upper millstone of lower prices and a lower millstone of higher cost of production which wholly inadequate capital entails there can be only one result—the earnings of labor and of land will grow steadily less until the ill-devised productive system depopulates the country and clears the way for a better organization of the economic forces.

This analysis of the cotton producers' financial condition takes into account the facts presented in the report of the Senate Committee on Agriculture and Forestry on "Cotton production and consumption and prices;" yet our analysis does not find an adequate cause of the unfavorable condition of producers in the commercial system, but in the productive system under prevailing relations of capital and labor applied to the land. The situation described in that report was summed up in these words:

"I. Generally, the financial condition of the farmers is bad, a very large percentage insolvent, and very few, indeed, are substantially increasing in the possession of property. The few who are actually solvent and making some increase in their estates are those who raise their own supplies—meat, corn, plow stock—producing cotton only as surplus. While it can not be said that these are prosperous, yet, as compared with their neighbors who rely mainly on cotton, their condition is better. Additions to the farmers' estates and prevention of waste and deterioration in the cultivated land and farm implements come to a very few where extra fertile land and extra energy and skill are combined with the strictest and most intelligent economy.

"II. With the prices prevailing in the years 1891–1893 in nearly every part of the cotton-producing region the cost of production equaled, if it did not exceed, the value of the cotton raised. This applies also to those small farmers who raise their crops by the labor of themselves and their families, if only the very low agricultural wages prevailing were allowed for their labor and a fair rent for their land."[1]

These conclusions were based on the level of prices in the years 1892–93. The trend of prices has been downward rather than upward since 1893, excepting a part of 1899 and for 1900 to the date given in the quotations below:

Closing quotations on middling upland cotton on dates named.(a)

Markets.	May 1, 1896.	Apr. 30, 1897.	Apr. 29, 1898.	Apr. 28, 1899.	Mar 30, 1900.	Apr. 27, 1900.
Galveston ....cents..	$7\frac{3}{4}$	$7\frac{1}{2}$	$5\frac{7}{8}$	$5\frac{7}{8}$	$9\frac{3}{8}$	$9\frac{7}{16}$
New Orleans ....do....	$7\frac{5}{8}$	$7\frac{9}{16}$	$5\frac{3}{4}$	$5\frac{11}{16}$	$9\frac{1}{4}$	$9\frac{3}{8}$
Mobile ....do....	$7\frac{1}{2}$	$7\frac{7}{8}$	$5\frac{3}{4}$	$5\frac{9}{16}$	$9\frac{5}{16}$	$9\frac{1}{4}$
Savannah ....do....	$7\frac{5}{8}$	$7\frac{7}{8}$	$5\frac{3}{4}$	$5\frac{5}{8}$	$9\frac{1}{8}$	$9\frac{7}{16}$
Charleston .... do....	$7\frac{1}{2}$	$7\frac{7}{8}$	$5\frac{3}{4}$	$5\frac{1}{2}$	$9\frac{3}{8}$	$9\frac{1}{4}$
Wilmington ....do....	$8\frac{3}{4}$	$7\frac{7}{8}$	$6\frac{1}{8}$	$5\frac{7}{8}$	$9\frac{1}{2}$	$9\frac{1}{2}$
Norfolk....................do....	$7\frac{3}{4}$	$7\frac{7}{16}$	$6\frac{1}{8}$	$5\frac{7}{8}$	$9\frac{3}{8}$	$9\frac{1}{2}$
Boston.................... ....do....	$8\frac{1}{8}$	$7\frac{11}{16}$	$6\frac{5}{16}$	$6\frac{1}{8}$	$9\frac{3}{8}$	$9\frac{13}{16}$
Baltimore ....do....	$8\frac{1}{8}$	$7\frac{3}{4}$	$6\frac{5}{16}$	$6\frac{1}{8}$	$9\frac{13}{16}$	$9\frac{7}{8}$
Philadelphia ....do ..	$8\frac{7}{16}$	8	$6\frac{5}{8}$	$6\frac{3}{8}$	$9\frac{7}{8}$	$10\frac{1}{16}$
Augusta ....do....	$7\frac{13}{16}$	$7\frac{3}{4}$	6	$6\frac{3}{16}$	$9\frac{5}{8}$	$9\frac{5}{8}$
Memphis ....do....	$7\frac{1}{2}$	$7\frac{7}{8}$	$5\frac{7}{8}$	$5\frac{3}{4}$	$9\frac{5}{16}$	$9\frac{3}{8}$
St. Louis....................do....	$7\frac{5}{8}$	$7\frac{7}{8}$	$5\frac{7}{8}$	$5\frac{13}{16}$	$9\frac{3}{8}$	$9\frac{3}{8}$
Houston ....do....	$7\frac{3}{4}$	$7\frac{7}{8}$	$5\frac{13}{16}$	$5\frac{7}{8}$	$9\frac{7}{16}$	$9\frac{3}{8}$
Cincinnati....................do....	$7\frac{3}{4}$	$7\frac{7}{8}$	6	6	$9\frac{5}{8}$	$9\frac{5}{8}$
Louisville ....do....	$7\frac{3}{4}$	$7\frac{1}{4}$	$6\frac{1}{8}$	$6\frac{1}{4}$	$9\frac{3}{8}$	$9\frac{1}{4}$
New York ....do....	$8\frac{3}{16}$	$7\frac{3}{4}$	$6\frac{3}{8}$	$6\frac{3}{16}$	$9\frac{5}{8}$	$9\frac{13}{16}$
Liverpool, England b ....pence..	$4\frac{13}{32}$	$4\frac{1}{4}$	$3\frac{13}{32}$	$3\frac{3}{8}$	$5\frac{3}{8}$	$5\frac{15}{32}$

a The Crop Reporter, May, 1900.

b 240 pence equal $1.8665.

The last few months have shown a tendency to a rise, but few are inclined to regard this as a permanent level. The cause of low prices is industrial rather than commercial. So must the recovery of cotton prices to producers be the result of industrial influences. With the growth of farm capital through the country banks of small capital, such as the national banking law of 1900 provides for, and the progress of manufactures in the South there will come, no doubt, demands for other farm products than cotton. Then the financial position of the cotton grower must improve and his influence upon the market count for a great deal more than it can now. As the lack of capital, in the credit system of cultivation is one cause of overproduction and low prices, so must the influx of cash capital be the remedy.[2] And cash capital is the inevitable attendant of industrial development.

It is not the large crop that favors this development most, but rather the commercial value of a moderate crop, because a moderate crop does not so completely take up the producer's capital in that one thing, and it furthermore puts the burden of competition upon consumers, thus maintaining prices. According to Mr. H. G. Hester's figures, the average commercial value of the cotton crop of 1899-1900 is $38.55 per bale, against $25.08 last year, $28.62 the year before, and $36.76 in 1896–97. The total value of the crop compares with the previous 5 years as follows:

Values of commercial crops.

1899–1900	$363,784,820	1895–96	$294,095,347
1898–99	282,772,987	1894–95	297,037,530
1897–98	320,552,606	1893–94	283,118,137
1896–97	321,924,834		

In summing up the situation, the chief defect in this productive system is under-capitalization. This source of economic weakness has been chronic. It has, in fact, tended to drain Southern agriculture year by year in proportion as this fact exercised an influence upon farm policy. More particularly under-capitalization has the four following effects upon the commercial position of the producer:

1. It tends to encourage overproduction by increasing acreage.
2. It tends to prevent diversification in farm policy.

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[1] Report of Senate Committee on Agriculture and Forestry, Washington, 1895, Part I.

[2] M. B. Hammond, The Cotton Industry, p. 138. American Economic Association, 1897.

3. It tends to enhance the cost of production in the face of a falling level of prices.

4. It tends to depress market values by obliging him to market so large a proportion of each crop immediately; that is, the scarcity of cash capital tends to increase the proportion of each crop that is forced into the publicly known visible supply and to decrease the proportion in the hands of the producer.

4. MANAGING ABILITY IN MAKING AND MARKETING COTTON.

The relation of landlord and tenant in cotton culture are such as to divide economic responsibility for results immediate and remote. It is to the interest of the tenant to get the largest immediate results with the smallest outlay of labor and capital. It is to the interest of the landlord to maintain the permanent productiveness of land. Under the system of tenancy by which the land is worked on shares, house, land, stock, and feed are provided for the tenant. He has the interest of ownership in almost nothing. He works with borrowed capital and on credit obtained from a merchant. Between the two claimants on the products of his labor, the making of cotton is the unmaking of the man. Under these relations the pressure for quantity of product is everywhere present, if not apparent; other considerations count for comparatively little. The solvency of the merchant and the social position of the landlord are both dependent upon a large yield; but between the merchant and the tenant the landlord's permanent interests are apt to be made quite secondary. The tenant is a creature of two masters, and no species of industrial management is more fatal to economical production than this. Where lands are rented for a money rental the results are in no wise essentially different. The system of management is divided against itself and can not but be inefficient. Of course there are notable exceptions, but we are speaking of general economic tendencies in the system of production under the leadership of divided economic interests. The tenant's labor, the landlord's land and stock, and the merchant's current capital constitute a system of production which must result in a divided or an indifferent type of economic responsibility in production.

In marketing the products of this system of production the same desire for prompt cash realization tends to sacrifice the crops by early sales. The tendency to carry the cotton to the gin as rapidily as possible and to put it on the market with the least delay is increasing. The table below gives the movement by quarters from September 1.[1]

Average percentage of the cotton crop brought in sight at the end of different quarters of the cotton year.

Period.	First quarter—Sept. 1 to Dec. 1.	Second quarter—Dec. 1 to Mar. 1.	Third quarter—Mar. 1 to June 1.
	Per cent.	*Per cent.*	*Per cent.*
1881–1883	45.7	85.1	97.1
1884–1886	52.9	90.6	98.1
1885–1888	52.9	90.3	97.1
1889–1891	51.6	87.9	97.9

This policy of management in production has tended to throw large areas of cotton lands into the hands of local merchants. Regrettable as this may seem, it has economic possibilities in it destined to improve the management in production and marketing. It concentrates ownership of land and stock and the advances of capital to the tenant into one instead of two economic interests. Whether or not this possibility of improvement is realized depends on the individual in each case. But it is certain that the dual system of control over production and marketing which the landlord and the merchant exercise is incapable of developing anything like an economically efficient tenantry. There is no substitute for personal management coupled with the active interest of ownership in making and marketing cotton any more than in any other species of enterprise.

In the preparation of cotton for the market nobody seems to be responsible for the uneconomical condition in which it reaches market. "Taken altogether," says Mr. Hammond, "it is generally admitted that the American bale is the clumsiest, dirtiest, most expensive, and most wasteful package in which cotton, or, in fact, any commodity of like value, is anywhere put up. It has no friends, either among the manufacturers, buyers, shippers, insurers, or producers. Custom seems alone responsible for this incubus upon the industry."[1]

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[1] The Cotton Plant, p. 353.

The general policy of putting the crops on the market at once has been largely due to the helpless financial position of the producer in the past. With improvement in method of cultivation has come the improved financial status of planters as a class. It is stated that the planters of the South are in much better financial circumstances than at any time since the war, and much more care is shown in the cultivation of the crop. A recent observer says: "We never saw better prepared land than that along the lines of travel from North Carolina through the cotton belt to Texas. The land is unusually well tilled, the furrows deep and carefully turned, and the soil well pulverized before planting. The bulk of the testimony favors the idea that an unusually large quantity of fertilizer has been used on the upland cotton fields."

The progress of improvement in financial conditions has led planters to consider commercial methods.

It has given rise to plans for the better marketing of the cotton crop. The following plan indicates the line on which it is proposed to work out this problem:

One of the most popular schemes proposed is that of the warehouse system of holding the crop so as to prevent the marketing of the bulk of the crop during the first three months of the cotton year or harvest period. Possibly the chief difficulty with this system is financial. It would seem to be susceptible of easy administration. Cotton has a permanency of value and ordinarily is exempt from deterioration, to which cereals are liable. There is no doubt but that the producer's financial status would be greatly improved if some scheme could be carried out by which he could hold his crop for more even distribution through the twelve months rather than to throw it all at once upon the market, with the inevitable consequence of lowering the price of his commodity.

II. ORGANIZATION OF THE DISTRIBUTIVE SYSTEM.

1. THE CONCENTRATION OF THE CROP AT INTERIOR TOWNS.

Between the farm and the factory the cotton crop passes through several stages of distribution. Its first state after entering the market is that of concentration into interior towns. In the daily reports of the movement of this commodity as many as thirty such points of concentration are mentioned, each one of which in the course of the year receives from 10,000 to nearly 2,000,000 bales each.[2]

Almost the entire movement to interior towns is a rail movement. Next in importance is the water movement, and lastly by wagon; but the latter two modes of carriage are relatively unimportant compared with the total. Locally, however, the wagon and water movements are still important and they increase with the growth of local consumption. At such points as Memphis, Columbus, Miss., and Columbus, Ga., St. Louis, Savannah, Charleston, Eufaula, Wilmington, Norfolk, Augusta, and New Orleans, receipts by water are important enough to regulate railway rates. The wagon receipts are noteworthy at the interior towns of Memphis, Columbus (Miss. and Ga.), Westpoint, Ga., Fort Gaines, Ga., Memphis, Savannah, Eufaula, Fort Smith, Ark., Denison, Tex., Gainesville, Tex., Vanburen, Ark., Augusta, Ga., Shreveport, La., Logansport, La., Texarkana, Ark., and Charlotte, N. C. It is claimed that as a rule wagon transportation to market is found to be cheaper than railway carriage up to 20 or 25 miles;[3] but in South Carolina a reduction of a local rate from 9 to 6 cents for a distance of 9 miles abolished wagon carriage entirely. The efforts of the different State railroad commissions to reduce rates on cotton have in numerous cases reduced the wagon movement. Texas and Georgia have possibly done most in this direction. In Mississippi and South Carolina the revision of local rates has begun. High local rates are regarded as prejudicial to an economical distribution of the cotton crop. The wagon movement depends on the readiness or ability of railroads to reduce short distance rates.

Most of the wagon roads are in none too good a condition at best, and therefore are ill fitted for economical movement of the crop. As long as local rates on the railroads are too high to get this business, the producer is obliged to reach the markets and the mills by wagon, however wasteful it may be as compared with carriage by rail.

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[1] The Cotton Plant, p. 362. [2] See Latham and Alexander's Handbook. [3] The Cotton Plant, p. 358.

Receipts of cotton at 30 interior towns, Sept. 1, 1897, to Sept. 1, 1898.

[From the Financial Chronicle.]

	Bales.		Bales.
Houston, Tex	1,768,460	Rome, Ga	65,497
St. Louis, Mo	898,245	Columbus, Ga	65,023
Memphis, Tenn	689,563	Columbus, Miss	59,580
Augusta, Ga	372,027	Brenham, Tex	54,422
Cincinnati, Ohio	288,393	Meridian, Miss	40,960
Atlanta, Ga	207,602	Albany, Ga	40,023
Little Rock, Ark	202,582	Nashville, Tenn	39,314
Montgomery, Ala	161,550	Raleigh, N. C	27,560
Shreveport, La	158,466	Charlotte, N. C	26,731
Dallas, Tex	123,356	Eufaula, Ala	21,940
Yazoo City, Miss	97,245	Greenwood, S. C	16,514
Vicksburg, Miss	93,748	Louisville, Ky	9,245
Athens, Ga	89,539		
Greenville, Miss	88,593	Total receipts	6,037,287
Helena, Ark	86,480	Total crop (1897-98)	10,897,857
Selma, Ala	86,379	Percentage of crop hauled to 30 interior towns	55.4
Natchez, Miss	86,067		
Macon, Ga	72,183		

Over one-half of the entire crop reaches these 30 interior towns in the course of the year. Their location is generally in the heart of productive districts, from which the cotton goes for consumption. In the economy of distribution these interior towns are nearly all competitive points as far as shipping facilities are concerned. Here local mills must compete with outside consumers, and the railroads compete with one another to direct the course of the traffic. It is evident, therefore, that the distribution of the cotton crop is subject to competitive conditions of traffic in the greater part of its course from producer to consumer. The competition which centers in these bases of distribution has done much to favor outside consumers, both domestic and foreign, but has rather hurt than helped local mills. This is owing to the fact that low long-distance rates have always been made use of by the railroads to justify charging high local rates. In fact, the competition of the local mill with the outside consumer really begins to affect the price at these points of concentration. At these interior points the receipts are given their various destinations. The speculator, the exporter, and the Northern manufacturer all meet the local consumer here and together influence the partition of the receipts, as well as prices to producers, throughout the year. These interior towns and the local points of origin are the places at which the Southern consumer competes most directly for his supply of cotton.

2. COMMERCIAL INTERESTS IN COTTON DISTRIBUTION.

There is a widespread impression that the main feature in the distribution of cotton is speculation in exchanges, where dealings in futures constitute the business of a privileged association of traders. Five or six years ago these commercial agencies were very generally held responsible for the low prices of cotton. The connection between the New Orleans and the New York cotton exchange and the prevailing level of prices was assumed to be a causal connection. Betting on futures was asserted to have a net effect in depressing prices of cotton paid to producers and thus operating in the interest of consumers.

It has never been clearly shown that there is such a causal connection between speculation and spot prices. Since that explanation was pressed upon the public mind in the George Report of 1893-94, cotton prices have fallen still lower through a greater part of the interval and subsequently risen to a level almost double the price at the lowest point in the course of prices during the intervening 6 or 7 years. In the meantime the center of interest has passed from production to consumption. The increase in domestic requirements of raw cotton and the progress of foreign demand have together diverted the attention of the interests involved to future development. The possibilities of home consumption and the competition of foreign consumers, including the manufacturers of the Far East, have for the time being led inquirers to overlook the trading interests occupied in handling the cotton crop between producers and consumers.

The tendency at present time is everywhere to cut out the middleman. The depression of earlier years like all other depressions, while not finding an adequate remedy for itself at the time, gradually worked revolutionary changes by eliminating commercial agencies and commercial methods which do not have in themselves the capacity to adopt economies such as enable commerce to recover from the paralysis of industrial depression. The exact cost of putting down cotton at foreign mills varies of course with localities, but on an average cotton can go from plantation to mill in Europe at the cost of about 1 cent per pound. Expenses have been greatly reduced in the export trade by more direct commercial relation between foreign consumers and local brokers. Brokers now operate in every town receiving any quantity of cotton. These brokers have correspondent brokers all over Europe through whom they sell to spinners direct, so that cotton can go from Augusta, Ga., for instance, to any mill in England or on the Continent with only freight, insurance, and two small brokerages of one-sixteenth of a cent each covering all expenses.

If this average of a cent per pound covers the cost from producer to consumer for the greater part of the cotton crop which is exported it is evident that the commercial interests and the transporting interests—the two chief claimants for the distribution of this charge—are not unduly expensive agencies. If two-sixteenths of a cent per pound be taken as the purely commercial charge and seven-eighths or fourteen-sixteenths of a cent be divided among freight, insurance, and all other expenses, it is difficult to see wherein any undue share goes to the maintenance of a speculative group of buyers and sellers who have subsequently nothing to do with the actual process of distribution. No estimates which we have been able to obtain of the expenses of handling cotton between producer and consumer includes any item or recognition of a claim on the part of dealers in "futures" for services in actual distribution. The inquiry here made has, therefore, looked upon the purely speculative problem as one so remotely connected, if connected at all, with the actual operation of the cotton trade as to lie practically beyond the range of distributive factors. Speculation in cotton "futures," whether at New Orleans, New York, or Liverpool, is of course effected by the buying and selling in every important cotton market in the United States, but these transactions are effects of commercial conditions in the cotton trade rather than the causes originating in these exchanges and operating upon the buyers and sellers of the actual product. Speculative dealing in future prices is therefore a register of individual reckonings rather than a means of making prices. In the long run these commercial agencies which anticipate the future and keep in mind the past serve rather as balance-wheels to the commercial mechanism than they do as forces which give an upward or downward turn to prices.

This view of the present functions of future dealings in the distribution of cotton amounts to substantially this: That the present and past course of cotton prices can in the main be explained by other than speculative causes. It need not be held that dealings in futures do not influence prices, but rather that in the long run cotton prices are very slightly influenced by a group of people pitting their judgments one against another as to the value of a given grade of product at a definite date in the future. In the long run such actions tend to neutralize one another, and their effect upon the level of prices will consequently tend to be neutral.

There are, therefore, sufficiently definite interests enlisted in the cotton trade to which we must look for explanations of any particular low cost of commercial operations. First among these we mention the conditions of competition among carriers, under which practically the whole cotton crop is marketed.

The distribution of the cotton crop is in this respect unique. In the first place the cotton territory is so situated that the main movement to market is from the center toward a circumference on which are located about twenty-five ocean and Gulf ports on the south and east, and interior gateways on the north and west. The result of this relation is to put the whole cotton movement under the stress of competition among carriers and distributing centers from the time it reaches the interior markets at which it is accumulated until it is laid down at the factory at home or abroad. In its distribution there is perhaps no other agricultural product having so large an element of competition as cotton. Not only is this the case with its actual transportation, but also in the matter of buying and selling. The small country buyer of cotton from his neighboring grower, even, may receive bids from the largest markets and manufacturing centers in different parts of the world. There is therefore a high degree of competition on the part of buyers the moment the cotton comes into the local market, and from the local market to the consuming mill it is seldom if ever exempt from this influence. In this respect, likewise, the cotton producer is possibly more favorably situated than any other class of agriculturists. He has more direct and, therefore, more real access to the world's markets in spite of appearances to the contrary. The cotton producer comes nearer getting the consumer's price for his cotton than is the case with any other important product in American agriculture.

The reasons for this are historical and geographical as well as commercial. The movement of the center of cotton production, like that of corn, has been going in a southwesterly direction. It now lies west of the Mississippi. With each advance in that direction access to the natural channels of distribution has been improved, the distance to the seaboard reduced, and the tendency toward reduction in expenses become more and more marked. With this tendency the enlargement of the foreign market has grown. Especially has the market been enlarged in continental Europe and in the Orient, so that more and more has the cotton movement become a movement by water. Competition on land by rail, competition of ports of shipment, and competition for ocean movement have given to this branch of transportation a rate of expense per unit of product among the lowest in modern commerce. The low cost of distribution does not, however, seem to apply to internal distribution to mills for Southern consumption.

As will be pointed out later, here, as elsewhere, the great economies in distribution have not primarily benefited the producer, but the benefits have largely gone to the consumer.

The main reason for this is to be found in the relative importance of foreign as compared with domestic consumption. With 70 per cent of the cotton sent abroad and 30 per cent (in round numbers) remaining at home, the competition among consumers, domestic and foreign, has, until quite recently, not been sufficient to enable the producer to strengthen his position in the market to any considerable extent. The position of the producer, as the investor of capital, has been such as to oblige a great majority of his class to put the cotton upon the market almost as fast as it ripened. This element of weakness contributed in the case of cotton, just as it did in the case of wheat, to load down the market with a visible supply for which there was at any one time slight need of competition on the part of foreign or domestic buyers. The inherent weakness of the producer's position deprives him of the opportunity of handling his surplus in such a way as to take advantage of competition among speculative buyers for future needs. Except, therefore, in periods of scarcity toward the end of the cotton-distributing year, the main competitive stress in the whole cotton situation is felt among the distributive agencies after cotton has left the producer's hands rather than among consumers in their relation to the producer.

While, therefore, the expenses of distribution of cotton per unit of product are among the cheapest the level of prices to producers is but slightly raised by reason of this low cost of distribution. Nor does the consumer of raw cotton get this entire gain. The competition among consumers for the sale of their manufactured products is so keen that even the consuming factory fails to reap any great benefit that comes from the lowest cost of distribution. The real gain is to the consumer of cotton goods.

The remedy for this unfavorable position of the cotton producer lies partly in a change in farm policy, by which the plantation may divide its labor and capital between the product of the soil which makes the farm household more nearly a self-sufficing unit on the one hand and the production of a commercial crop on the other. But still more important in its bearing upon the producer's position in the market is the necessity of more nearly equalizing the domestic and foreign demand for the domestic cotton crop.

The operation of distributive interests is determined by the relative importance of the consuming demands. The main volume is still destined for export. We are our own next best customers.

As matters stand now, Europe takes two-thirds and America nearly all the balance. Every increase on the part of domestic demand will give an increment of advantage to the domestic producer, and as soon as it becomes a matter of contest between foreign and domestic consumers for the division of the cotton crop, the producer will reap more of the benefits of a highly economical distribution.

Few of us realize how far from this point the United States really stands. The policy in which the producer of raw cotton is most interested is one which will develop the demand for cotton goods in export trade rather than the finding of more foreign markets for raw cotton. The growth of the cotton manufacturing industry, by which the cost of getting the finished product of domestic manufacture to the foreign consumer will be reduced much below the cost of sending the raw product to the foreign manufacturer, is evidently the policy in which the producer has the largest possibilities of gain. Even at the present time, in different sections of the Carolinas where mills are located, the manufacturer has to pay as much as, if not more than, the New York cash price for raw material of the local producer. In other words, the producer is getting an addition to his price equal to or greater than the cost of carrying his raw material to New York.

3. THE RISE OF INTERNAL CENTERS OF CONSUMPTION.

For our purposes we regard the Southern cotton States as a geographical unit with well-established centers of internal consumption. We mention Huntsville, Ala.; Augusta, Columbus, and Macon, Ga.; Salem, Charlotte, Durham, and Concord, N. C.; Columbia, Greenville, Pelzer, Rock Hill, and Spartanburg, S. C., as representative centers. All these and many others are leading factors in the cotton movement to the extent of competing with the external movement, both for Northern mills and for export. According to the Manufacturer's Record of February 22, 1900, the twelve Southern States had then 441 cotton mills in operation or in course of erection. These consume about a million and a half bales yearly. The three leading States are North Carolina, South Carolina, and Georgia.

Summary of cotton mills in Southern States.

[From the Manufacturer's Record.]

States.	Number of mills.	Total mill consumption.	Spindles.	Looms.
		Bales.		
Alabama	38	121,128	550,939	13,743
Arkansas	3	3,288	18,360	310
Georgia	79	281,527	1,116,556	27,168
Kentucky	11	25,447	69,512	995
Louisiana	3	18,749	71,352	1,761
Maryland			169,484	3,147
Mississippi	7	21,650	119,254	3,333
North Carolina	169	374,891	1,421,581	31,942
South Carolina	80	466,181	1,857,036	51,851
Tennessee	29	36,358	178,520	3,732
Texas	5	17,156	45,056	1,319
Virginia	17	44,502	154,711	5,371
Total	441	1,410,877	5,775,361	147,702

The commercial cotton-crop year, begun September 1, 1898, and ended August 31, 1899, had the largest movement of cotton in the history of American commerce. Not only had the railway and water movement from plantations been the largest on record, but the home consumption of the mills, both in the North and in the South, had been greater than ever.

The United States Department of Agriculture, by its usual method of estimating the crop of the States and Territories, compiles statistical data furnished by the officials of all the rail and water lines that have transported cotton from the States of production, by the officials of the mills located in those States, and by special agents of the Department at the Southern ports and important receiving points in the interior. The reports from these sources are condensed in the following table, so as to show the number of bales of cotton moved from each State and Territory to the ports, to Northern and Western mills, to Canada, and all other foreign destinations in comparison with the demand for Southern mill consumption, by States.

Cotton crop of 1898–99.[1]

[In commercial bales.]

State or Territory.	Movement and mill purchases.		
	Forwarded by rail, etc.	Bought by mills.	Total.
Alabama	1,079,871	121,128	1,200,999
Arkansas	940,773	3,288	944,061
Florida	35,064		35,064
Georgia	1,232,810	281,527	1,514,337
Indian Territory	215,269		215,269

[1] J. L. Watkins: The Cotton Crop of 1898–99, p. 7, United States Department of Agriculture.

Cotton crop of 1898-99—Continued.

State or Territory.	Movement and mill purchases.		
	Forwarded by rail, etc.	Bought by mills.	Total.
Kansas	3		3
Kentucky	50	25,447	25,497
Louisiana	879,264	18,749	898,013
Mississippi	1,302,420	21,650	1,324,070
Missouri	33,120	3,017	36,137
North Carolina	336,407	374,891	711,298
Oklahoma	109,479		109,479
South Carolina	581,788	466,181	1,047,969
Tennessee	311,321	36,358	347,679
Texas	3,413,245	17,156	3,430,401
Utah		34	34
Virginia	13,990	44,502	58,492
Total	10,484,874	1,413,928	11,898,802

It is hardly realizable what changes must follow in the growth of these manufacturing communities in the cotton States. Certainly none will be greater than the reaction of manufacturing upon agriculture itself. Director Beaty, of the Clemson College textile department, discusses this influence upon farm prices and farm wages as follows in the Charlotte Observer:[1]

"Estimating the world's population at 1,500,000,000, about 500,000,000 regularly wear clothes, about 750,000,000 are partially clothed, and 250,000,000 habitually go naked. The world's visible cotton crop for the year 1898-99 was a little less than 14,000,000 bales, averaging 500 pounds each. It would require 42,000,000 bales, averaging 500 pounds each, to clothe the entire population of the world. The above figures, taken in round numbers from statistics, show that overproduction of cotton is not the cause of prevailing low prices. We must look to some other way of handling our vast crop of raw staple than selling it to other people to be manufactured and then sold back to us at three times its value as compared to its value in the raw material.

"The average cotton crop in South Carolina is about 1,000,000 bales, or 500,000,000 pounds. Disposing of this 500,000,000 pounds at 7 cents, $35,000,000; five million pounds of white cloth, at 20 cents, $100,000,000; this would bring an increase of $65,000,000 into the State in favor of manufacturing over the sale of the raw product. This amount would not go to the treasuries of the factories alone, but would be divided among the farmers, first of all, by an increase in price, which would probably average one-fourth of a cent per pound. In addition to this, he would find ready sale at increased prices for wood, butter, chickens, eggs, and many other perishable farm products which are now of small value owing to the fact that there is no great demand for them.

"All other business would be stimulated by this increase of cash-earning labor."

These effects are to be appreciated only by considering the widespread diffusion of manufacturing towns in the South. We give the total list for each State, from the Manufacturers' Record, up to February 22, 1900:

ALABAMA.

Name.	Location.	Spindles.	Looms.
Alabama Mills	Alabama City	30,000	1,000
American Net and Twine Co	Anniston	5,000	
Anniston Manufacturing Co	do	11,200	320
Autaugaville Factory (idle)	Autaugaville	2,200	63
Avondale Mill	Birmingham	33,692	1,000
Birmingham Cotton Manufacturing Co	do	5,200	
Columbia Cotton Mills	Columbia	2,500	
Indian Head Mills of Alabama	Cordova	25,232	840
Tuscaloosa Manufacturing Co	Cottondale	12,000	300
Chewalla Cotton Mills	Eufaula	3,724	124
Eufaula Cotton Mills	do	10,463	321
Ashcraft Cotton Mills[2]	Florence	8,000	
Cherry Cotton Mills	do	12,000	100
Dallas Manufacturing Co	Huntsville	15,000	1,600
Huntsville Cotton Mill Co	do	10,000	
Merrimack Manufacturing Co.[2]	do	200,000	6,000

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[1] Quoted from the Manufacturers' Record, February 22, 1900.

[2] Under construction.

ALABAMA—Continued.

Name.	Location.	Spindles.	Looms.
West Huntsville Cotton Mill	Huntsville	5,280	
Cherokee Mills Co	Mobile	1,200	
Barker Cotton Mills[1]	do	20,000	
Mobile Cotton Mills[1]	do	5,000	
Alabama Cordage Co	Montgomery	1,040	
Montgomery Cotton Mills	do	5,616	168
People's Cotton Factory	do	10,000	320
Blue Spring Mill	Oxford	2,496	80
Coosa Manufacturing Co	Piedmont	15,408	
Prattville Cotton Mills and Banking Co	Prattville	10,000	290
Wehadkee Cotton Mills	Rock Mills	4,000	75
Cawthon Cotton Mill Co	Selma	13,000	400
Selma Cotton Mill Co	do	5,000	144
Alabama Cotton Mill[2]	Speigner	3,300	100
Hurricane Creek Manufacturing Co	Spring Garden	a	
Sycamore Mill	Sycamore	12,800	
McDonald Cotton Mills[1]	Sylacauga	10,000	
Highland City Cotton Mills	Talladega	5,000	
Talladega Cotton Factory	do	5,000	
Tallassee Falls Manufacturing Co	Tallassee	23,000	390
Rope and Yarn Mill	Tuscaloosa	2,600	
J. Snow Hardware Co	do	4,360	108
Union Springs Cotton Mills	Union Springs	5,000	
Uniontown Warehouse Co	Uniontown	628	
40 mills		550,939	13,713

ARKANSAS.

Name.	Location.	Spindles.	Looms.
Ouachita Cotton Mills	Arkadelphia	4,000	90
Dardanelle Cotton Mills[3]	Dardanelle	3,000	
Thomas Cotton Mills	Little Rock	3,360	
Mammoth Springs Cotton Mills	Mammoth Springs	8,000	220
4 mills		18,360	310

GEORGIA.

Name.	Location.	Spindles.	Looms.
Harmony Mills	Alice	800	
Aragon Mills	Aragon	20,000	400
Athens Manufacturing Co	Athens	10,000	350
Mallison Braided Cord Co	do	2,000	5
Princeton Manufacturing Co	do	3,800	100
Star Thread Co	do	6,264	
Atlanta Cotton Mills	Atlanta	17,672	550
Exposition Cotton Mills	do	46,500	1,435
Scottdale Mills[1]	do	10,000	350
Fulton Bag and Cotton Mills	Augusta	42,000	1,352
Augusta Factory	do	35,000	1,000
Enterprise Manufacturing Co	do	33,000	928
Globe Cotton Mills	do	1,728	114
Isaetta Mills	do	4,110	150
Jno. P. King Manufacturing Co	do	60,384	1,812
Riverside Mills	do	[3]	
Sibley Manufacturing Co	do	43,256	1,409
Sutherland Manufacturing Co	do	8,900	
Warwick Cotton Mills	do	4,100	224
Hutcheson Manufacturing Co	Banning	5,000	
Barnesville Manufacturing Co	Barnesville	7,416	
Canton Cotton Mills[1]	Canton	5,000	100
Mandeville Cotton Mill[1]	Carrollton	6,000	200
Cedartown Cotton Co	Cedartown	23,500	
Standard Cotton Mills[1]	do	10,000	
Columbus Manufacturing Co.[1]	Columbus	20,000	640
Clegg Manufacturing Co	do		116
Eagle and Phenix Manufacturing Co	do	50,000	1,800
Hamburger Cotton Co	do	6,000	210
Muscogee Manufacturing Co	do	14,000	450
Swift Manufacturing Co	do	13,000	423
Cordele Cotton Mills Co.[1]	Cordele	3,600	
Christian Commonwealth	Commonwealth		5
Porter Manufacturing Co	Cornelia	3,000	
Bibb Manufacturing Co	Covington	15,000	108

[1] Under construction.

[2] Owned by the State—convict labor.

[3] Not reported.

GEORGIA—Continued.

Name.	Location.	Spindles.	Looms.
Dalton Cotton Mills[1]	Dalton	5,000	120
Crown Cotton Mills	do	20,000	500
Phenix Factory	Debruce	5,100	
Georgia Western Cotton Mills[1]	Douglasville	20,000	500
Pearle Mills	Elberton	7,500	
Swift Cotton Mills	do	7,200	174
Trio Manufacturing Co	Forsyth	3,000	
Forsyth Manufacturing Co	do	6,000	
Georgia Manufacturing Co	Gainesville	3,500	
Mary-Leila Cotton Mills	Greensboro	5,000	160
Griffin Manufacturing Co	Griffin	15,500	593
Rushton Cotton Mills[1]	do	5,000	160
Kincaid Manufacturing Co	do	12,550	130
Spalding Cotton Mills[1]	do	7 500	200
Harmony Grove Mills	Harmony Grove	2,800	156
Hartwell Cotton Mill	Hartwell	3,000	102
High Shoals Manufacturing Co	High Shoals	10,000	81
Hogansville Manufacturing Co.[1]	Hogansville	5,000	
Pepperton Cotton Mills	Jackson	12,900	160
Jewell Mills	Jewells	4,000	121
Glover Manufacturing Co.[1]	Juliette	2,040	
Union Cotton Mills	Lafayette	7,680	212
Dixie Cotton Mills	Lagrange	20,000	385
Lagrange Cotton Mills	do	10,000	124
Gwinnett Cotton Mills[1]	Lawrenceville	5,000	
Massachusetts Mills in Georgia	Lindale	51,264	1,726
Bibb Manufacturing Co	Macon	25,000	
Payne Cotton Mills	do	3,500	
Manchester Manufacturing Co	do	10,000	
Willingham Cotton Mills	do	5,180	
Ocmulgee Cotton Mills[1]	do	20,000	1,000
McRae Cotton Mills[1]	McRae	5,600	
Monroe Cotton Mill	Monroe	5,200	500
Newnan Cotton Mill	Newnan	6,300	
Whittier Cotton Mills	Oakdale	10,000	
Palmetto Cotton Mill	Palmetto	5,500	87
Pelham Manufacturing Co.[1]	Pelham	3,300	100
Houston Factory	Perry	2,240	60
Taylor Manufacturing Co	Potterville	2,500	
Aberdeen Mill	Poulan		74
Atlantic and Gulf Mills[1]	Quitman	1,500	
Raccoon Mills	Raccoon Mills	3,500	104
Rome Cotton Factory	Rome	5,200	108
Roswell Manufacturing Co	Roswell	1,200	168
Wahoo Manufacturing Co	Sargents	3,000	
Savannah Cotton Mills	Savannah	7,500	
Shoal Creek Manufacturing Co	Shoal Creek	2,200	
D. B. Grover, president[1]	Statesboro	4,000	
Annestown Cotton Mills	Stone Mountain	1,736	
Thomaston Cotton Mills[1]	Thomaston	5,000	160
Capps Cotton Mills[1]	Toccoa	6,000	
Toccoa Cotton Mill	do	5,000	160
E. A. Fincher	Toonigh	800	
Trion Manufacturing Co	Trion Factory	49,936	1,414
Park Cotton Mills	Troup Factory	1,600	52
Union Manufacturing Co.[1]	Union Point	2,100	
Strickland Cotton Mills[1]	Valdosta	10,000	350
Waynman Cotton Mill	Waynmanville	3,400	76
Riverdale Cotton Mills	Westpoint	12,000	320
Lanett Cotton Mills	do	61,000	1,700
West Point Manufacturing Co	do	20,500	180
Georgia Manufacturing Co	Whitehall	12,000	120
Whitehall Yarn Mill	do	2,500	
100 mills		1,116,556	27,168

KENTUCKY.

Name.	Location.	Spindles.	Looms.
Argonaut Cotton Mill Co	Covington	4,500	
Grahamton Cotton Mill	Grahamton	3,200	75
Henderson Cotton Mills	Henderson	35,000	916
Louisville Cotton Mills Co	Louisville	14,432	
Louisville Girth and Blanket Mills	do	380	4
Maysville Cotton Mills	Maysville	6,000	
Cohankus Manufacturing Co	Paducah	6,000	
7 mills		69,512	995

[1] Under construction.

LOUISIANA.

Name.	Location.	Spindles.	Looms.
Clinton Cotton Mills[1]	Clinton	2,500	
Alden Knitting Mills	New Orleans	2,300	
Lane Mills	do	17,000	381
Maginnis Cotton Mills	do	40,752	1,216
New Orleans Cotton Mills Co	do	1,400	11
Louis Kohlmann	do	2 400	
Hargrove Cotton Mills[1]	Shreveport	5,000	150
7 mills		71,352	1,761

MARYLAND.

Alberton Cotton Mills	Alberton	11,000	472
Columbia Mills	Baltimore	3,000	
J. S. Johnson & Co	do		6
Mount Vernon Co	do	56,600	730
Woodberry Manufacturing Co	do	40,000	383
Dumferline Mill	Elkton	4,000	100
Thistle Mills Co	Ilchester	7,384	304
Franklinville Mills	Franklinville	3,500	40
Laurel Mills	Laurel	11,000	250
Oella Mills	Oella	10,000	298
Savage Manufacturing Co	Savage	11,000	300
Warren Manufacturing Co	Warren	6,000	160
Ashland and Franklin Mill	Wetheredville	3,000	104
13 mills		169,484	3,147

MISSISSIPPI.

Canton Cotton Mills[1]	Canton	5,000	
Tombigbee Mills	Columbus	8,064	252
Hashuqua Manufacturing Co	Hashuqua	1,500	40
Kosciusko Cotton Mills[1]	Kosciusko	5,000	250
Laurel Cotton Mills[1]	Laurel	15,000	500
McComb City Cotton Mills[1]	McComb	6,000	
Meridian Cotton Mills	Meridian	8,440	400
Moorhead Cotton Mills[1]	Moorhead	5,000	
Natchez Cotton Mills Co	Natchez	11,872	336
Rosalie Mills	do	7,250	240
Stonewall Manufacturing Co	Stonewall	20,914	482
Yocona Mills	Water Valley	5,000	
Mississippi Mills	Wesson	15,184	833
West Point Cotton Mills[1]	Westpoint	5,000	
14 mills		119,254	3,333

NORTH CAROLINA.

Efird Manufacturing Co	Albemarle	5,408	
Wiscosset Mills Co	do	16,480	
Asheville Cotton Mills	Asheville	8,448	420
Stowesville Cotton Mill	Bellemonte	2,500	24
Southern Cotton Mills	Bessemer City	9,940	401
Durham Shoals Cotton Mill	Boiling Springs	2,400	
Alamance Cotton Mill	Burlington	960	94
Aurora Cotton Mill	do	12,352	788
Carolina Cotton Mills	do	3,072	58
Elmira Cotton Mill Co	do	6,000	475
Glencoe Cotton Mills	do	3,620	186
Juniata Cotton Mills	do	6,400	
Lakeside Cotton Mills	do	3,000	150
E. M. Holt Plaid Mill	do		140
Windsor Cotton Mill	do	3,120	160
J. M. Odell Manufacturing Co	Bynum	6,500	
Cedar Falls Cotton Mill	Cedar Falls	3,936	136
Worth Manufacturing Co	Central Falls	12,000	420
T. F. Lloyd	Chapel Hill	1,200	
Ada Manufacturing Co	Charlotte	7,920	
Alpha Mills	do	9,448	
Atherton Mills	do	10,000	
Charlotte Cotton Mills	do	10,352	250
Charlotte Oil and Fertilizer Co	do		

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[1] Under construction,

NORTH CAROLINA—Continued.

Name.	Location.	Spindles.	Looms.
Crowley Manufacturing Co	Charlotte		240
Highland Park Manufacturing Co	do	14,000	1,272
Louise Mills	do	13,800	520
Magnolia Mills	do	3,100	11
O. A. Robbins Co	do	2,000	
Victor Cotton Mills	do	12,672	
Cherryville Mill	Cherryville	6,000	
Gaston Manufacturing Co	do	6,800	192
Vivian Cotton Mills	do	1,632	
Patterson Manufacturing Co	China Grove	8,944	158
Enterprise Manufacturing Co	Coleridge	4,000	
Bala Cotton Mills Co	Concord	3,000	
Cabarrus Cotton Mills	do	4,400	140
Cannon Manufacturing Co	do	23,000	800
Coleman Manufacturing Co	do	5,612	140
Lippard Yarn Mills	do	2,000	
Odell Manufacturing Co	do	30,000	1,650
Cooleemee Cotton Mills[1]	Cooleemee Falls	25,000	800
Cumberland Mills	Cumberland	3,000	
Dallas Cotton Mills	Dallas	4,160	116
Linden Manufacturing Co	Davidson	2,500	
Cornelius Cotton Mills	do	5,408	120
Double Shoal Cotton Mill	Double Shoal	4,074	
Commonwealth Cotton Manufacturing Co	Durham	7,000	
Durham Cotton Manufacturing Co	do	23,500	810
Erwin Cotton Mills Co	do	25,000	1,000
Pearl Cotton Mills	do	10,000	182
Edenton Cotton Mills	Edenton	5,000	
Elizabeth City Cotton Mills	Elizabeth City	8,600	
Elkin Manufacturing Co	Elkin	1,928	
Altamahaw Mills	Elon College	6,496	324
Ossipee Cotton Mill	do	3,600	350
Bluff Mills	Fayetteville		200
Fayetteville Cotton Mills	do	3,120	
Holt-Morgan Manufacturing Co	do	5,000	100
Holt-Williamson Manufacturing Co	do	5,200	
Tolar, Hart and Holt Mills	do	10,000	
Florence Mill	Forest City	14,000	400
Sterling Cotton Mills	Franklinton	6,240	
Franklinville Manufacturing Co	Franklinville	3,000	90
Randolph Manufacturing Co	do	4,000	128
Arlington Mills[1]	Gastonia	6,000	
Avon Mills	do	10,080	260
Gastonia Manufacturing Co	do	9,000	300
Loray Mills[1]	do	50,000	1,600
Modena Cotton Mill	do	9,000	208
Ozark Mills	do	8,000	
Trenton Cotton Mills	do	3,000	
Hiawatha Manufacturing Co	Gibsonville	3,744	
Mineola Manufacturing Co	do	1,600	200
Robbins Manufacturing Co	Goldsboro		
Wayne Cotton Mills	do	3,800	90
Bellemont Cotton Mills	Graham	2,944	123
Oneida Cotton Mills	do	10,624	566
Sidney Cotton Mills	do		108
Granite Falls Manufacturing Co	Granite Falls	4,000	
Hucomuga Mills	Greensboro		144
Proximity Manufacturing Co	do	18,264	1,000
Revolution Cotton Mills[1]	do		
Van Deventer Carpet Co	do		100
Harden Manufacturing Co	Harden	2,080	
High Shoals Manufacturing Co.[1]	do	5,000	150
Cora Manufacturing Co	Haw River	7,128	110
Granite Manufacturing Co	do	8,745	436
Thos. M. Holt Manufacturing Co	do	7,138	252
Henderson Cotton Mills	Henderson	15,000	216
Henrietta Mills	Henrietta	71,000	1,746
Collier Cotton Mills[1]	Hickory Grove	5,000	500
High Falls Manufacturing Co	High Falls	3,000	
Eno Cotton Mills	Hillsboro	10,000	
Hope Mills Manufacturing Co	Hope Mills	15,000	750
T. P. Jenks	Hull Cross Roads	180	
Anchor Cotton Mills	Huntersville	8,616	
Oakdale Cotton Mills	Jamestown	5,000	
Jonesboro Cotton Mills Co	Jonesboro	3,000	
Mount Pleasant Manufacturing Co	Kimesville	2,000	101
Cora Mill *a*	Kings Mountain		
Crowder Mountain Cotton Mill	do	2,500	93
Dilling Cotton Mill	do	11,136	552
Enterprise Mills	do	2,592	130
Kings Mountain Manufacturing Co	do	5,000	130

[1] Under construction.

NORTH CAROLINA—Continued.

Name.	Location	Spindles.	Looms.
Lula Manufacturing Co.[1]	Kings Mountain	7,500	
Kinston Cotton Mills	Kinston	6,112	
Laurel Mills	Laurel	650	
Laurel Bluff Cotton Mills	Laurel Bluff	2,500	
Ida Yarn Mill	Laurel Hill	4,192	
Richmond Cotton Factory Co	do	5,000	
Springfield Cotton Mill	do	2,500	
Scotland Cotton Mill[1]	Laurinburg	10,000	
Cleveland Cotton Mills	Lawndale	5,200	
Wennonah Cotton Mills	Lexington	9,000	500
Daniel Manufacturing Co	Lincolnton	10,000	
Elm Grove Cotton Mills	do	6,600	
Indian Creek Manufacturing Co	do	2,080	
Laboratory Cotton Mills	do	5,000	
Lincoln Cotton Mills	do	7,000	
Long Shoals Cotton Mills	do	7,280	
Willow Brook Cotton Mill	do	2,500	
Long Island Cotton Mills	Long Island	3,000	
Gastonia Cotton Mills	Lowell	4,000	
Spencer Mountain Mills	do	6,000	
McAden Mills	McAdensville	15,000	320
Maiden Cotton Mills	Maiden	7,000	
Providence Cotton Mills	do	5,000	
Union Cotton Mills	do	8,764	
Mursheon Cotton Mills	Manchester	3,000	
Mariposa Cotton Mills	Mariposa	2,300	
Maxton Cotton Mill	Maxton	1,800	
Avalon Cotton Mills[1]	Mayodan	13,000	
Mayo Mills	do	30,000	
Eldorado Cotton Mills	Milledgeville	5,000	
Monbo Cotton Mills	Monbo	2,416	
Monroe Cotton Mills	Monroe	8,500	500
Mooresville Cotton Mills	Mooresville	4,750	106
Alpine Cotton Mills Co	Morganton	3,500	
Mountain Island Mills	Mountain Island	6,250	104
Hamburg Cotton Mills	Mount Airy	1,600	
Hazlehurst Cotton Mills	do	912	
Albion Company	Mount Holly	2,200	
Mount Holly Mills	do	1,936	
Nims Manufacturing Co	do	3,700	
Tuckaseege Manufacturing Co	do	6,600	
W. R. Kindly Cotton Mill Co	Mount Pleasant	4,000	
Catawba Cotton Mill[1]	Newton	2,000	
Newton Cotton Mills	do	7,500	
Norwood Manufacturing Co	Norwood	5,000	
Patterson Cotton and Woolen Mills	Patterson	2,480	51
Dover Yarn Mills	Pineville	5,400	
Caraleigh Mills Co	Raleigh	9,152	356
Pilot Cotton Mills	do	5,600	220
Raleigh Cotton Mills	do	13,536	
Columbia Manufacturing Co	Ramseur	11,076	340
Engleworth Mills	Randleman		102
Naomi Falls Manufacturing Co	do	6,000	335
Plaidville Manufacturing Co	do	2,500	193
Randleman Manufacturing Co	do	5,288	400
Edna Cotton Mills	Reidsville	13,000	552
Roanoke Mills Co	Roanoke Rapids	12,096	130
Great Falls Manufacturing Co	Rockingham	4,512	139
Ledbetter Manufacturing Co	do	2,640	
Midway Mills	do	6,200	
Pee Dee Manufacturing Co	do	12,784	602
Roberdel Manufacturing Co	do	6,384	300
Steele's Mills	do	20,000	600
Textile Manufacturing Co	do		12
Rocky Mount Mills	Rocky Mount	27,000	
Roxboro Cotton Mills[1]	Roxboro	5,000	
Levi Cotton Mills	Rutherfordton	6,240	
Arista Cotton Mills	Salem	5,000	250
South Side Manufacturing Co	do	11,000	224
Kesler Manufacturing Co	Salisbury	5,000	
I. Littman	do		
Salisbury Cotton Mills	do	20,024	590
Vance Cotton Mills	do	10,000	
Sanford Cotton Mills[1]	Sanford	5,000	250
Saxapahaw Cotton Mills	Saxapahaw	5,000	100
Belmont Cotton Mills	Shelby	4,500	
Lauraglenn Mills	do	3,100	
Shelby Cotton Mills[1]	do	6,000	300
Hadley People's Manufacturing Co	Siler City	2,000	
Nantucket Mills	Spray		765
Spray Cotton Mills	do	17,000	
Leaksville Cotton Mills	do		400
Stanley Creek Cotton Mills	Stanley Creek	5,040	

[1] Under construction.

NORTH CAROLINA—Continued.

Name.	Location.	Spindles.	Looms.
Statesville Cotton Mills	Statesville	7,000	180
Buffalo Manufacturing Co	Stubbs	2,000	
Virginia Cotton Mills	Swepsonville	4,160	200
Tarboro Cotton Factory	Tarboro	13,000	200
Fountain Cotton Mills	do	5,380	
W. L. Alspaugh	Taylorsville	700	24
Taylorsville Cotton Mill	do	2,000	50
Smitherman Cotton Mills Co	Troy	3,328	
Turnersburgh Cotton Mill	Turnersburg	1,609	
Wadesboro Cotton Mills Co	Wadesboro	6,704	
Royal Cotton Mills[1]	Wake Forest	5,000	
Rodman & Heath Cotton Mills	Waxhaw	5,000	
Willard Manufacturing Co	Willardville	1,850	30
Delgado Mills	Wilmington	10,324	140
Wilmington Cotton Mills	do	7,840	360
Wilson Cotton Mills	Wilson	6,180	
Engleworth Mills Co	Worthville		130
Worth Manufacturing Co	do	10,108	386
206 mills		1,121,581	34,912

SOUTH CAROLINA.

Abbeville Cotton Mills	Abbeville	13,216	940
Warren Manufacturing Co	Aiken	35,000	1,000
Orr Cotton Mills[1]	Anderson	23,000	700
Anderson Cotton Mills	do	60,000	1,881
Cox Manufacturing Co.[1]	do	5,000	
Arlington Cotton Mill	Arlington	4,000	36
Pendleton Factory	Autun	2,500	
Bamberg Cotton Mill	Bamberg	11,000	250
Middleburg Cotton Mill	Batesburg	3,000	172
Batesville Mill	Batesville	2,500	
Aiken Manufacturing Co	Bath	27,500	766
Belton Mills	Belton	23,500	700
Bennettsville Manufacturing Co	Bennettsville	15,000	
Cherokee Falls Manufacturing Co	Blacksburg	10,400	548
Camden Cotton Mills	Camden	10,000	300
De Kalb Cotton Mills[1]	do	10,000	
Norris Cotton Mill Co	Cateechee	5,840	312
Chapin Manufacturing Co.[1]	Chapin	6,000	180
Vesta Cotton Mills	Charleston	28,000	736
South Carolina Cordage Co	Cheraw	1,500	
Eureka Cotton Mills	Chester	10,032	
Springstein Mills	do	6,720	170
Wyne Mills *a*	do	5,000	
Clifton Manufacturing Co.	Clifton	85,792	2,150
Clinton Cotton Mills	Clinton	16,128	150
Capital City Cotton Mills[1]	Columbia	6,000	200
Red Bluff Mills	Clio	10,000	500
Clover Cotton Manufacturing Co	Clover	10,000	
Carolina Mills Co.[1]	Columbia	10,000	
Columbia Mills Co	do	24,000	
Granby Cotton Mills Co	do	57,000	1,500
Olympia Cotton Mills[1]	do	104,000	2,600
Palmetto Cotton Mills Co	do	9,000	250
Richland Cotton Mills	do	26,120	720
Cowpens Manufacturing Co	Cowpens	7,072	264
Darlington Manufacturing Co	Darlington	12,000	384
Dillon Cotton Mills[1]	Dillon	10,000	350
J. M. Geer and others[1]	Easley	10,000	
Edgefield Manufacturing Co	Edgefield	5,000	208
Enoree Manufacturing Co	Enoree	30,720	820
Fairmont Mills	Fairmont	6,144	168
Fingerville Manufacturing Co	Fingerville	3,000	
Oak Lawn Cotton Mills	Fork Shoals	1,800	
Fort Mill Manufacturing Co	Fort Mill	5,200	123
Millfort Mill Co	do	5,400	331
Fountain Inn Manufacturing Co	Fountain Inn	3,070	
Gaffney Manufacturing Co	Gaffney	67,000	1,404
Glendale Mills	Glendale	17,280	518
Graniteville Manufacturing Co	Graniteville	31,900	1,106
American Spinning Co	Greenville	10,000	
Brandon Mill[1]	do	12,000	350
Huguenot Mills	do	5,176	328
Mills Manufacturing Co	do	15,340	412
Monaghan Cotton Mills[1]	do	25,000	
F. W. Poe Manufacturing Co	do	25,088	752
Greenwood Cotton Mill	Greenwood	10,000	384
Grendel Cotton Mills	do	10,752	624
Victor Manufacturing Co	Greers	24,996	656

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[1] Under construction.

SOUTH CAROLINA—Continued.

Name.	Location.	Spindles.	Looms.
Brooks Manufacturing Co	Greers		
Saxe-Gotha Mills	Irene	5,000	240
Alpha Cotton Mills[1]	Jonesville	5,000	
Lancaster Cotton Mills	Lancaster	12,000	476
Manetta Mills Co	Lando	6,000	
Langley Manufacturing Co	Langley	52,000	1,500
Laurens Cotton Mills	Laurens	40,320	1,168
Lexington Manufacturing Co	Lexington	3,500	204
Lockhart Mills	Lockhart	25,000	800
Valley Falls Manufacturing Co.[1]	Lolo		
Ashby Cotton Mills	Marion	2,642	121
Marie Mills	McColl	5,100	
McColl Manufacturing Co	do	15,000	
Anchor Cotton Mills Co.[1]	Newberry	10,000	
Newberry Cotton Mills	do	25,184	900
Courtenay Manufacturing Co	Newry	16,176	584
Enterprise Cotton Mills[1]	Orangeburg	11,000	350
Orange Mill	do	5,000	
Pacolet Manufacturing Co	Pacolet	57,000	2,202
Pelham Mills	Pelham	11,000	
Pelzer Manufacturing Co	Pelzer	112,000	3,200
Pickens Mills*a*	Pickens	5,000	
Piedmont Manufacturing Co	Piedmont	61,032	1,978
Reedy River Manufacturing Co	Reedy River Factory	11,000	360
Cedar Shoals Manufacturing Co	Richburg	1,420	
Arcade Cotton Mill	Rock Hill	6,100	314
Highland Park Manufacturing Co	do		486
Manchester Cotton Mills	do	12,000	300
Rock Hill Cotton Factory Co	do	8,000	192
Victoria Cotton Mills	do	7,000	276
Seneca Cotton Mills[1]	Seneca	10,000	300
Arkwright Mills	Spartanburg	11,136	604
Beaumont Manufacturing Co	do	3,072	
Saxon Mills*a*	do	10,000	
Spartan Mills	do	25,000	2,522
Sumter Cotton Mills	Sumter	4,000	
Buffalo Cotton Mills[1]	Union	50,000	1,200
Monarch Cotton Mills[1]	do	10,000	
Union Cotton Mills	do	89,500	2,366
Walhalla Cotton Mill Co	Walhalla	10,000	320
Colleton Cotton Mills	Walterboro	5,280	136
Tucapau Mills Co	Wellford	16,656	468
Cheswell Cotton Mills[1]	Westminster	5,000	250
Whitney Manufacturing Co	Whitney	20,000	648
Fairfield Cotton Mills	Winnsboro	5,000	210
Sutro Cotton Mills	Yorkville	2,000	
York Cotton Mills	do	16,232	
105 mills		1,857,036	51,851

TENNESSEE.

Bristol Cotton Mill	Bristol	2,136	
Vance Cotton Mill Co	Chattanooga	1,200	
Richmond Spinning Co	do	10,000	
Columbia Cotton Mill Co	Columbia	5,000	136
Excelsior Manufacturing Co	Cuero	1,500	40
Tennessee Cotton Mills	Elizabethton	1,800	
Eureka Mills	Englewood	1,440	224
Fall Mills Manufacturing Co	Fall Mills	801	
Great Falls Cotton Mills Co	Falls City	3,500	136
Humboldt Cotton Mills[1]	Humboldt	5,000	
Bemis Bros. Bag Co.[1]	Jackson	20,000	
Jonesboro Yarn Mills	Jonesboro	5,000	
Brookside Mills	Knoxville	24,000	636
Eagle Cotton Mills	Lawrenceburg	3,000	
Annis Cotton Mills Co	McMinnville	2,700	61
Memphis Cotton Mills Co	Memphis	11,622	252
James McElwee	Mount Verd	1,800	
Phoenix Cotton Mills	Nashville	20,000	710
Tennessee Manufacturing Co	do	33,000	1,018
Newport Cotton Mill	Newport		192
Warren Manufacturing Co	Oregon	1,440	16
Pinewood Cotton Mills	Pinewood	2,576	44
Rockford Mills Co	Rockford	1,500	
Sylvan Mills	Shelbyville	3,720	104
Strathmore Manufacturing Co	Strathmore	2,288	
Trenton Cotton Mills	Trenton	6,000	160
B. F. McGrew	Vale Mills	1,500	
27 mills		178,526	3,732

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[1] Under construction.

TEXAS.

Name.	Location.	Spindles.	Looms.
Meadowbrook Cotton Mill Co.[1]	Barker	11,000	300
Dallas Cotton Mills	Dallas	12,000	372
Galveston City Cotton Mills	Galveston	19,200	590
Augusta Manufacturing Co	Houston		15
Sherman Cotton Mill	Sherman	2,856	72
5 mills		45,056	1,349

VIRGINIA.

Name.	Location.	Spindles.	Looms.
Riverside Cotton Mills	Danville	67,650	2,772
Lynchburg Cotton Mill Co	Lynchburg	33,000	1,060
United Cotton Mills	Manchester	12,000	520
Lamberts Point Knitting Mills	Norfolk	2,161	
Pocahontas Mills	Petersburg	7,000	170
Blue Ridge Manufacturing Co	do	3,021	107
Ettrick Manufacturing Co	do	9,181	262
Matoaca Manufacturing Co	do	10,689	330
Quinn Manufacturing Co	do	5,000	150
Roanoke Cotton Mill Co.[1]	Roanoke	5,000	
10 mills		154,711	5,371

WEST VIRGINIA.

Name.	Location.	Spindles.	Looms.
Wheeling Weaving Mills			26
1 mill			26

[1] Under construction.

SUMMARY.

The most noteworthy outcome of local developments through these centers of cotton consumption will be the reorganization of agriculture on an industrial basis; that is, an agriculture correlated with local industries rather than dependent on distant or foreign consumption of farm products. A wide distribution of factories will be the first phase of this development, affording many local markets. When concentration shall begin depends largely on the rate policy of railroads.

It is to be noted that the Southern States have now nearly half as many cotton mills as the Northern and the Western States combined.

Number, capacity, and capital of cotton mills in Northern and Western States.

[Compiled from the Textile Almanac.]

States.	Number.	Capital.	Capacity.				
			Spindles.	Looms.	Sets.	Cards.	Machines.
Arkansas	5	$450,000+	21,000	585			
California	1	600,000	10,000	200			
Colorado	1	250,000	17,312	480			
Connecticut	93	13,220,000+	1,033,308	24,713	16		1,024
Delaware	4	500,000+	35,552	838			
Idaho							
Illinois	9	4,070,000+	39,100	760		5	3
Iowa							
Kansas							
Maine	23	14,480,000+	919,237	22,747	15		
Maryland	17	3,445,000+	59,857	3,147	33		
Massachusetts	270	91,067,000+	7,329,657	172,990		401	3,021
Michigan	1						
Minnesota	2			4	1		
Nebraska	1	150,000+	15,488	416			
New Hampshire	29	15,897,000+	1,254,581	35,642			
New Jersey	37	6,250,000+	410,084	3,272		42	20
New Mexico							
New York	68	7,043,000+	582,174	145,000	226	18	22

Number, capacity, and capital of cotton mills in Northern and Western States—Continued.

States.	Number.	Capital.	Capacity.				
			Spindles.	Looms.	Sets.	Cards.	Machines.
North Dakota	....	....	....	....	....	....	....
Ohio	9	525,000+	18,000	98	....	....	2
Oregon	....	....	....	....	....	....	....
Philadelphia and vicinity	127	1,621,000+	89,631	9,439	25	....	230
Pennsylvania	40	4,017,000+	202,246	5,386	26	....	1,784
Rhode Island	128	20,896,000+	1,940,638	62,976	21	268	20
South Dakota	....	....	....	....	....	....	....
Texas	9	1,000,000+	43,515	1,035	....	....	....
Utah	1	....	732	19	2	....	....
Vermont	5	1,170,000+	99,960	2,082	6	....	....
Virginia	10	3,322,000+	191,408	5,079	....	....	....
Washington	....	....	....	....	....	....	....
West Virginia	1	....	....	26	....	....	....
Wisconsin	7	375,000+	34,628	1,107	....	....	21
Wyoming	....	....	....	....	....	....	....
Total	898	190,408,000	14,348,108	498,241	371	731	6,147

4. RAILROADS AS REGULATORS OF INTERNAL CONSUMPTION.

Throughout the cotton belt the subject of local railway rates is receiving more attention from year to year with the growth of cotton manufacturing. The position of the State railway authorities has generally been taken after careful inquiry into the conditions. As a rule they have sought, in the first place, to institute lower schedules of local rates as the volume of traffic has grown; and secondly, to see to it that if the through or interstate rate on cotton were reduced the local rate must be correspondingly reduced.

To the first of these changes there has not generally been much resistance on the part of railway management. Texas successfully controls rates on State shipments, but can not of course control interstate shipments. The Texas commission, however, regulates the entire movement of the crop within the State. It issues rulings governing concentration and defines the relations of compressing companies with the railroads. It attends carefully to the rates charged shippers for such services. It exercises vigilant oversight to prevent evasions, on one pretext or another, on the part of carriers. It sees to it that its own citizens are not made the victims of practices detrimental to their interests, chief of which is that of discrimination by carriers among localities. Possibly it is not too much to say that the rapid advance in the cotton production of Texas has been greatly extended by the reductions and adjustments of rates made through the railway commission of that State.

The reduction of local rates is a live question in Mississippi. The latest report of that railroad commission recognizes that in the reluctance of the railroads to readjust their local rates they are retarding the development of the State. The position taken is thus stated:

"When the managers of the railroads give to their local interests the same attention that they do now to terminal points, and when they take in hand entirely the adjustment of local rates, assisted by an intelligent and friendly commission, the problem will be solved. Time should be given to the study of the true interests of the people who live on the lines of the roads as well as the true interests of the railroads. The present system of making lower through rates than any other competing line, which is the general rule, and dogmatically insisting that local rates should not be lowered must necessarily be abandoned."

In South Carolina the situation is such that unless local rates by rail are lowered cotton must often either reach mills by wagon or be exported to other States. The existing rates were made when this State's cotton crop was only half as large as it is now. In a letter addressed to the traffic managers of the South Carolina railroads the railroad commission of that State cites the fact that the price of cotton when the present rate went into effect was 7 cents per pound; for the past three years (1896–1898) it was 5 cents. The railroad commissioners further described the effect of high rates upon the distribution of the crop, and their influence on factory supply:

"Until the past 3 or 4 years the cotton crop was almost entirely consumed by factories beyond the limits of our State, while now 75 per cent will be consumed in the State; therefore, we consider that the conditions now existing are very different from those which obtained when the present rate was made.

"In upper South Carolina nearly the whole crop produced in that section is consumed by the cotton factories, and a large proportion is hauled by wagons on account of what has been regarded excessive local rates. To illustrate this statement, we will give a case in point, although we could name many: A farmer living very near a railroad station and 9 miles from a cotton factory always hauled his crop—some 200 bales—on his wagons. Last winter, when the public roads were very bad, he inquired of the commission what was the rate on cotton for a distance of 9 miles. When we replied 9 cents, he complained so much at what he considered an exorbitant rate that we asked the traffic manager of the road to make some reduction in the rate, and the rate was made 6 cents, which was satisfactory to the complainant, and the road was able to haul 200 bales of cotton that otherwise would have been hauled on wagons.

"This illustration accounts for the small amount of cotton that has in the past been shipped locally, and shows why this tonnage has not been larger for this class of freight."[1]

The effort to force reductions of local rates does not, however, always contribute to that end. It must be borne in mind that a low local rate does not always move cotton, especially when it is the subject of competition, as it now is, from outside the State. When competing roads seeking traffic from branch lines give a local road a more favorable rate for contributions of freight than the rate allowed between local points, then the movement is apt to become a through movement rather than local. This is apparently the reason why some of the most advanced cotton-consuming States in the South consume so little of their own crop. The attempt to apply a revised cotton tariff to local shipments in South Carolina affords an illustration of this fact. The effort was made to effect a general reduction in short hauls in order to favor local mills on a given road, believing that it would increase the tonnage more than proportionately on a road with numerous junction points for outside shipment. The revised tariff had the effect of driving cotton out of the State. "If you force us to maintain the tariff as it now stands," the company in question urged, "this company can not reasonably calculate on realizing, on an average, more than 8¼ cents per hundred pounds on any cotton it has on its line of road within this State. Our present proportion of our through rates to any of our ports will be greater than any local haul we will have on cotton.

"We have 20 prosperous cotton mills on our line of road, which we have helped to build at a considerable expense, and which we have looked forward to receiving a considerable revenue from in the future, but the rate in question will necessitate our exporting cotton instead of hauling it to our own mills. We would get more on export cotton than 8¼ cents per hundred pounds, which is all we can reasonably calculate on getting from the new tariff on cotton to our Southern mills."[2]

The repressive tendency of excessively high local railway rates upon industry is nowhere more apparent than when a locality is passing out of a purely agricultural into an industrial régime. This is the case in the South to-day, in many localities, though not generally so. Here as elsewhere there is, however, no lack of instances in which rate-making powers have failed to recognize the suicidal results of fighting for through low-paying traffic and sacrificing local high-paying traffic. In the North and West this policy has quite generally crowded local industries into competitive centers in order to live at all. In the South the high local rates on cotton have promoted exportation of this staple at the expense of progress in domestic manufacture. This railway policy, whether wisely or unwisely, produces two industrial results—it has promoted centralization, and by its failure to readjust its local rates to develop local industries, has to that extent repressed the tendency to decentralization, now so evident in industries most directly dependent on the raw materials of agriculture. If railway development means to develop rather than to exploit agricultural enterprise, it will be necessary for its rate-making officials to address themselves more seriously to the local-rate situation so far as farm markets are concerned. Otherwise the Southern industry will soon begin to centralize at competing points to escape the relatively excessive rates to local noncompetitive points.

A right step in this direction would seem to consist in making a base-rate between the Southern points of largest production and the Carolina points of largest consumption, similar to the Chicago-New York grain rate, for example.

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[1] Report South Carolina Railroad Commissioners, p. 11, 1899.

[2] Report Railroad Commissioners, South Carolina, p. 17, 1899.

The rate would have to be low enough to make it cheaper to get cotton from the Southwest than from the East, and not too low to make it an inducement for the railroads to divert cotton to external markets.

The establishment of many cotton mills in the Carolinas, notably South Carolina, has revolutionized the cotton movement in the South. The demands of these mills for raw material have entirely altered the old condition of affairs. They can not longer depend on their own territory for all of the staple they need, and are forced to buy in Georgia, Alabama, Mississippi, and other Southeastern States.

It is estimated that they should have a standard basis of rates from these cotton-producing sections that will enable them to compete on equal terms with the New England mills, in southwestern territory.

III.—THE OPERATION OF DISTRIBUTIVE INTERESTS.

1. THE RELATION OF THE WORLD MARKET TO THE FARM MARKET.

In the previous chapter we described the main features in the structure of the system of handling cotton from producer to consumer. We saw that the various movements of cotton were divided among competing towns in the interior, among competing seaports and gateways, and among still more widely distributed areas of consumption, both within the cotton belt and without, and lastly, among cotton consumers in the States of production, in the Northern and Western States of the United States, and still more important, in the various foreign countries. The world's demand is the great distributive force at work. The world's demand for cotton is felt first at the seaports, where the bulk of the visible supply may be said to be kept for distribution. As the pressure of this demand increases, all the agencies reaching back into the interior impart a competitive impulse to the entire distributive system. The consuming interests, the transporting interests, the commercial interests, and the producing interests, all feel the effects of a stronger or weaker demand. In the following account we propose to analyze the operation of these organized interests in order to point out the influence which each exerts in the process of distribution.

The producing interests have a definite relation to the market. They have, moreover, a definite relation to each particular factor in the market, whether it be a transporting, a commercial, or a consuming interest. It makes all the difference in the world whether a producer is in the position of a hungry laborer obliged to sell his labor under penalty of suffering the pangs of hunger and loss of self-respect, or whether he is in the position of the manufacturer who simply loses interest and profit on products withheld from market for the time being.

The cotton producer, in the great majority of cases, occupies the position similar to that of the laborer who must sell his labor immediately in order to live and prevent ruinous loss. The minority of producers stand in the position more nearly akin to the manufacturer who simply runs the risk of depression of prices or of property by withholding the products of his enterprise from the market. This fundamental distinction enters into the heart of the operation of distributive interests in the disposition of the cotton crop. The second class of producers may enter the consuming market at the same time and place, but the one is the servant of the market and the other is the master of the market, and the servants are far more numerous than the masters.

No farm market of universal scope comes quite so close to the producer as the cotton market; and yet no class of producers have had less positive influence upon the level of prices than this weaker class of cotton producers. The explanation of this is to be found in the fact that under existing conditions of production the cotton producing interests are divided in practice and divorced one from the other in policy. The three producing interests are the landlord, the capitalist, and the laborer. We have seen that the landlord's interest very often involves little financial responsibility in the process of production. His test of the process is that of yearly rentals. The capitalist is either the merchant who advances current supplies to the laborer—the actual cultivator—and must insist on securing himself by a crop lien which inforces early sale of cotton to reimburse himself for advances to labor, or, if the landlord himself makes advances to labor in the form of implements, live stock, and subsistence, the same urgency exists to sell to pay maturing obligations on the part of the landlord.

The same divided relationship among producing interests prevents restriction of acreage, because it is too hazardous to experiment on another crop when none of these interests has any margin of capital to employ in their productive efforts. Consequently, productive interests, taken as a whole, are in no position to protect themselves either by reducing the product or by withholding the supply for a later and better price. With cotton, as with wheat, when the three-fourths of the crop has been put into the world's visible supply, then the commercial influence of the producer, who has parted with his cotton, amounts to nothing.

The cause of this untenable position of producing interests is to be found in the financial condition of the grower himself—the actual cultivator of the soil. His particular situation in the mechanism of the market is so well described by Mr. Harry Hammond in his official bulletin of the Department of Agriculture that we quote his statement in full:

"After the cotton is baled the next step is to put it upon the market with the least delay practicable. Formerly the cotton planters, either themselves or through their factors, shipped their crops directly to the principal markets of this country or Europe. Now much the largest part of the crop goes at once into the hands of cotton factors or merchants who have made advances of cash or supplies to the farmers. The usual amount of advances is intended to be about $10 a bale at the highest legal rate of interest. The exigences of the case generally cause them to exceed this, and the persistent decline in the price of the staple has made collections somewhat more difficult and the business of making advances is by no means as it once was. The charge for selling and storage varies, but $1 a bale for selling and 50 cents for storage for the first month, and half that amount for each subsequent month may be considered a fair average. Insurance is to be counted also, so that it appears from the examination of some account sales that all the charges for selling sum up on an average to $1.93 per bale, or to about 7 per cent on the net value of the crop to the farmer, or half a cent per pound of lint. With the increasing number of cotton factories in the South a larger amount of cotton is being sold directly to the mills. If it could be grown without the advances these charges might all be saved. But the party making advances stipulates that such a number of bales be brought to them for storage and sale, and in case the specified number is not delivered a forfeit of $1.50 for each bale short of the number is to be paid. The transactions of the farmer with the factory are very satisfactory. The morning paper informs both parties of the price of cotton the world over. The farmer is the better for saving the charges of the factor, and the mill saves agents' charges for buying, drayage, and freight, so that they agree easily with one another. Cotton brokers at the chief milling points, and even the spinners themselves in Europe and America, receive daily offers from peripatetic cotton buyers at numerous points in the interior to furnish cotton on through bills of lading at 10 to 15 points (50 to 75 cents a bale) above cost, insurance, and freight. The farmer brings his cotton to the town where some merchant or banker has advanced to him, several buyers bid on it, and the purchaser settles at the banker's or the merchant's, discharging the farmer's debt and giving him the residue. The cotton is put on the railroad platform to be shipped to the nearest compress and start on its journeyings. A large part of the business is transacted by the great exporting companies, many of them large concerns with the command of much capital, whose business it is to move most of the world's crops from producer to consumer. They are satisfied to clear an annual net profit of 6 per cent on the immense capital employed, and in doing this it is to their interest to cheapen the intermediate costs and bring the producer and consumer close together. As an evidence of the reduction made in these costs, it will be noticed that the transaction of these transfers by the large cities has been a great source of profit to them, and consequently of cost to the other parties, and of late years the annual sales of spot cotton in these cities has greatly decreased. This decline has been, between 1876 and 1894, in New Orleans from 31¼ per cent of the crop to 12½ per cent; in Memphis from 9¾ per cent to 4⅙; in Savannah, from 5½ per cent to 2¼; in Charleston, from 7 per cent to 2⅜. More direct and cheaper methods have skipped over these intermediary markets."[1]

The producer is often the victim of wasteful and antequated methods of handling the crop, for which he is not really responsible. In the export of cotton, for instance, deductions are made by the trade, to the detriment of the producer, at a rate which is far in excess of the actual waste incurred.

The justice of this claim against the trade will be recognized from the facts showing how the net weight of cotton is actually obtained in the Liverpool market. The net weight is arrived at, according to Mr. A. F. Shepperson, the cotton-trade expert, by making the following deductions from the gross weight, on the basis of a 500-pound bale:

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[1] The Cotton Plant, pp. 381-382.

	Pounds.
Gross weight of bale	500
Deduction for draft (iron bands or ties)	2
	498
Tare of 4 pounds on each hundredweight (112 pounds)	17.8
Net weight of cotton paid for	480.2

"As a matter of custom," Mr. Shepperson writes, "when cotton is sold in this country to parties in Liverpool, it is almost universal practice to allow 6 per cent from the American gross weight to cover deductions for the bands and bagging."

The loss in gross weight is a little less than 20 pounds; the commercial deduction of 20 pounds, equals a loss of 4 per cent to the producer on exported cotton alone.

"This tare on cotton is the weight of the ties and bagging that are used for protecting the cotton from damage to which, without them, it would be likely subjected in the course of its transportation to distant markets. This charge is now, and I believe has always been, estimated at 6 per cent on the gross weight. This rate was not, perhaps, originally considered excessive, because the tie and bagging material then used was much heavier than that which is now in general use. It does not, under these circumstances, seem right that the old charge of 6 per cent should still be operative. If that rate was a sufficient charge when the tare was heavier, it surely is more than sufficient now that it is so much lighter, and the cotton grower should not be called upon to pay charges for tare that does not exist. There should be a diminution in these charges for tare proportionate to the diminution in the extent of the tare itself. If these charges for tare levied 50 years ago were then adequately compensatory and correct, they are surely now, in view of decrease in the amount of actual tare, more than compensatory, and are incorrect. The charge for tare on a 500-pound bale of cotton is 31 pounds. This gives to the producer but 469 pounds for which he is paid on a 500-pound bale. Now, the average weight of ties and bagging, which is the tare, on a bale of cotton after being compressed, is about 21 pounds, a difference of, say, 10 pounds per bale in favor or the cotton grower, as against the charges exacted of him on the same account in favor of the purchaser, and to that extent is a loss to the farmer which he could not in any equitable sense be required to sustain. It is, to the extent of 10 pounds per bale. * * * Taking the cotton crop of last year in Texas as our basis, and it was the shortest crop raised for years in the State, it amounted to 1,800,000 bales, selling, on an average, at 8 cents per pound. Now, charging against each bale the fictitious tare of 31 pounds, instead of 21 pounds, it will be at once apparent that the aggregate loss to Texas cotton farmers, on even the short crop of last year, was very great—no less than $1,440,000. The crop of 1894 would show a loss of over $2,000,000 that the farmer was entitled to."[1]

2. THE RAILWAY MOVEMENT TO SEAPORTS AND INTERIOR GATEWAYS.

The distribution of the cotton crop can hardly be understood without reverting to the competitive situation of the southern railways both among themselves and with water lines. There is hardly a single point within the Atlantic and Gulf slope of the cotton States that is not subject to water and rail competition either actually or potentially.

In southern railway development this competition of carriers for freight ended in an association of competitors to maintain rates at an early period after the war. This association affected an apportionment of traffic to which the cotton movement to and from interior points is especially subject. When competing lines or places fail to get their due share of cotton traffic, rates are "shrunk" so as to divert a larger portion of the traffic over the neglected lines. This practice results in restoring the balance, and prevents the ruinous competition of earlier times.

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[1] Agricultural Bureau of Texas, p. 10, 1895.

The completeness with which this division is effected is illustrated by the division of the tonnage on the thirteen different roads of South Carolina in 1898:

Cotton-tonnage per cent of the different railroads, 1898.[1]

	Per cent.
Southern Railway Company	11.17
Charleston and Savannah Railroad	5.46
Florence Railroad	3.33
Central Railroad	4.77
Cheraw and Darlington Railroad	11.60
Charleston and Western Carolina Railroad	12.25
Wilmington, Columbia and Augusta Railroad	7.89
Manchester and Augusta Railroad	8
Northeastern Railroad	3.69
Georgia, Carolina and Northern Railroad	12.02
Green Pond, Walterboro and Branchville Railroad	2.87
Carolina and Northwestern Railroad	6.56
South Carolina and Georgia Railroad	12.20

Considering the volume of cotton traffic moved prior to the time of the organization of the railroads to maintain rates, cotton was carried at a ruinously low level of cost. Competition had made this inevitable. The effect of the rate-maintaining association was no doubt to even up rates generally, if not to raise them considerably higher in a number of particular cases. The limits of profitable competition had been passed, and it was necessary to retrace the lines within which the cotton-carrying roads could cooperate without ruining one another financially.

This feature in traffic organization regulates the seaboard and overland movement of cotton to-day. From Piedmont centers of concentration cotton is carried to northern Atlantic seaports by rail, or by rail to the coast and thence by water. No doubt the competitive capacity of the all-rail route is due largely to the necessity of finding return freight for cars sent southward with manufactured goods from New York, Philadelphia, and Baltimore. Under such conditions anything that these cars can earn to lessen the cost of being returned empty is an economical advantage to all concerned.

From the interior towns in which the cotton crop is gathered it moves (1) either to the Atlantic and Gulf seaports, (2) to the northern gateways lying on the Potomac or the Ohio rivers, (3) or to interior mills.

The seabord movement within the cotton belt is, however, still the chief feature of distribution. The facts are given in the table following for the crop 1897-98, which was a representative crop year:

Receipts of cotton at twelve Southern seaports, year ending August 31, 1898.

Seaports.	Bales.	Per cent of crop (1897–98).	Seaports.	Bales.	Per cent of crop (1897–98).
New Orleans	2,686,604	24.7	Brunswick, S. C.	269,720	2.5
Galveston	1,925,038	17.7	Florida	118,433	1.1
Savannah	1,190,258	10.9	Texas City	98,068	.9
Norfolk	588,464	5.4	Port Royal, S. C.	75,877	.7
Charleston	471,994	4.3	Newport News	25,602	.2
Mobile	363,115	3.3			
Wilmington	323,730	2.9	Total	8,136,903	71.6

The gateways in the cotton trade are those cities through which the cotton is carried northward, eastward, and westward. Of these the first rank is accorded to St. Louis. The 6 cities of this character, with their rank in cotton traffic for the last 4 months of the calendar year 1898, are given herewith to illustrate the relative rank of these gateway points in this traffic.

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[1] Report of South Carolina Railroad Commissioners, 1899, p. 13.

Sources and destination of cotton through St. Louis.[1]

SOURCES.

From—	1898–99.	1897–98.	1896–97.	1895–96.
	Bales.	*Bales.*	*Bales.*	*Bales.*
Arkansas	467,587	508,626	274,576	264,888
Texas	232,178	178,617	136,218	179,029
Missouri	20,112	27,124	22,545	11,095
Tennessee	92,021	80,788	80,516	50,092
Mississippi	88,772	44,248	41,146	47,061
Indian Territory	59,368	40,661	3,694	1,497
Alabama	20,630	5,883	1,572	3,079
Kentucky	52	217	414	149
Louisiana	27,083	11,940	9,296	7,922
Kansas	1	367	61	9
Oklahoma	20,269	758	375	862
Total receipts	1,028,373	899,229	570,413	565,683
Deduct for half-round bales	38,414			
Net receipts	989,959	899,229	570,413	565,683

DIRECTION OF SHIPMENTS.

For export to—	1898–99.	1897–98.	1896–97.
	Bales.	*Bales.*	*Bales.*
England	271,521	221,832	119,288
Germany	28,394	11,798	4,791
France	6,843	1,931	800
Belgium	315	500	176
Holland	258		
Russia	300	670	
Italy	22,521	9,104	25
Scotland	178	691	257
China		50	
Sweden		500	
Austria	3,822		793
Japan	12,977	11,863	668
Canada	30,384	72,123	22,643
Total bales exported	377,513	331,065	149,441
Shipped to points in United States	586,063	538,772	423,435
Total shipments, bales	963,576	869,837	572,876
Deduct for half-round bales	30,540		
Net shipments	933,036	869,837	572,876

The position of St. Louis as a distributive gateway for this product is of special importance. The receipts for the year 1898–99 were derived from 11 States, and were little short of being half as great as those of Galveston—the second largest port in the country or quite as great as the total crop of South Carolina. The Upper Mississippi Valley may be said to receive the greater portion of its cotton by way of St. Louis. Being in position to handle cotton cheaply, manufacturing is the more likely to develop rapidly. Distribution to domestic points takes about 60 per cent of the annual receipts and the balance goes to foreign countries, mainly to Canada and the Orient by way of the Pacific Coast ports. Recently, however, Texas gulf ports have competed successfully for the oriental traffic in cotton.

SUMMARY.

From the tables given it is apparent that three-fourths of the cotton goes to the seaports of the South Atlantic and the Gulf. Three of these ports—New Orleans, Galveston, and Savannah—handle more than half of the entire crop, and 12 of them handle three-fourths of the crop. The overland movement takes about 17 per cent of the crop, the balance being divided among various lines and points.

Of interior gateways for northern, western, and central distribution St. Louis is the leading outlet. The volume going through this trade center is about one-twelfth of the crop. The oriental movement by rail to the Pacific ports has largely taken this direction, but recently the ports of New Orleans and Galveston have been successfully competing for cotton destined for Japan.

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[1] From Trade and Commerce of St. Louis.

Overland movement through interior gateways.[1]

Gateways.	Four months ending January 1, 1898.	Eight months ending May 1, 1898.	Twelve months ending September 1, 1898.
	Bales.	*Bales.*	*Bales.*
St. Louis	485,411	795,723	875,847
Cairo	201,353	352,131	400,136
Parker	12,871	30,498	32,681
Rock Island	27,133	46,273	46,941
Louisville	57,591	120,141	133,841
Cincinnati	57,696	135,433	155,900
Via other routes	74,176	145,351	200,647
Mills, not included in above	5,983		
Gross movement	922,214	1,625,850	1,845,993
Overland to New York, Boston, St. Louis, etc	248,309	511,299	613,696

[1] Financial Chronicle, vols. 66 and 67, pp. 64, 438, 909.

3. THE EFFECT OF SOUTHERN CONSUMPTION ON FARM PRICES.

The world's consumption of cotton (1899) is in round numbers 14,000,000 bales. Of this quantity the United States produced over 11,000,000 commercial bales. The division of this greater proportion of the world's supply among consumers is worked out in the following table of percentages of the crop consumed among the three most important consuming territories, namely, Great Britain, Continental Europe, and the United States.

It appears that Great Britain and the Continent of Europe consume two-thirds of our crop. The United States consumes in Northern and Southern mills the other one-third. A comparison of the consumption of American cotton by all other consumers with American consumption for the past 40 years shows a progressive increase on the part of the demands of the mills in the United States. The following figures bring out this fact very clearly:

Percentages of American cotton crop consumed in each country, 1859–1899.

Place of consumption.	1859.	1869.	1879.	1889.	1893.	1899.[1]
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Great Britain	55	48	36	40	35	32.
Europe (Continental)	16	19	25	28	35	32.
Other countries	6	3	3			3.
Northern United States	19.4	27	32	24	20	19.
Southern United States	3.6	3	4	8	10	12.
Total	100	100	100	100	100	100
Other countries	77	70	64	68	70	68.3
United States	23	30	36	32	30	31.7
Total	100	100	100	100	100	100

[1] The above table, except the last column (1899), is from The Cotton Plant, Bulletin No. 33, U. S. Dept. of Agriculture, in the chapter on "The handling and uses of cotton," by H. Hammond, p. 384. Percentages for 1899 are based on figures in Bulletin No. 17, The Cotton Crop of 1898–99, U. S. Dept. of Agriculture.

There is one fact of such significance that it must not be allowed to escape the attention of the inquirer into the cotton industry and trade—that is, that the United States is the largest consumer of cotton of any single country in the world. According to the Right Honorable Leonard H. Courtney, of the London Statistical Society, this country first surpassed Great Britain in 1898.[1]

The rate at which new mills are being erected and the mills already established being enlarged in the North and the South makes it necessary to consider the domestic demand, in the light of the Southern mills, in their relation to the level of prices for raw cotton. While it is true that the Southern mills consume but 9 per cent of the world's consumption, and but 12.6 per cent of the American crop, it is nevertheless evident from a closer study of the relation of the Southern mill demands to prices that the Southern consumption is influencing the level of farm prices far out of proportion to the relative volume of the world's crop consumed in the South.

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[1] An Experiment in Industrial Expansion, in Journal of the London Statistical Society, December, 1898.

There is a class of facts which the distant observer overlooks in the study of this phase of the question. Wherever there is a cotton mill within 30 miles of the planter he generally sells to the mill, receiving its cash value without any expense. The widespread distribution of these mills, now numbering not far from 500, forms so many centers competing with Manchester, Chemnitz, Lowell, Fall River, or any other large consuming center dependent upon the American supply.

Looking at the subject from the purely American standpoint, we find that the whole United States consumes 3,553,000 bales. The Southern mills alone take 1,413,928 bales, or almost 40 per cent of domestic consumption. While, then, it is true that Southern mills figure quite lightly as competitors in the world's demands, on the other hand, in the partition of the portion left for consumption in the United States, these mills are rising to an importance which is bound to influence farm prices far more favorably than is generally believed.

Buying by the Southern consumer has been generally supposed to be based on the New York price, less freight to New York, but this is not really the case. The Southern consumers have begun to affect the level of prices much more positively than this general statement implies. Inquiries among consumers themselves bring out the real facts in the matter. The secretary of a long-established company in the Piedmont section of the Carolinas says: "The cotton we produce at such points as Maxton, Jonesboro, Wilmington, as well as from (more) southern points, costs us very nearly, if not quite, as much as New York spots." The basis of the market on which the Southern cotton manufacturer makes his bid for cotton and actually buys cotton is of course Liverpool, New York, and New Orleans prices. These exchanges still control the market because they reflect the world's demand and influence the movement of supplies. The reaction of demand and supply operating through these central markets gives to all cotton buying a speculative character, so that the Southern manufacturer, as well as the entire trade, foreign and domestic, must use his best judgment in providing himself with a supply of raw material. His purchases are always intended for future consumption, of course, and the longer the period between purchase and consumption the greater is the speculative element involved. The mill manager may to-day look out upon cotton which to-morrow may be on its way to the ends of the earth. There is therefore no phase of competition from which the manufacturer in the South is exempt in obtaining his supply of cotton. Already the mills in the Piedmont Carolinas consume much more cotton than is produced there. The percentage of production by States may be best indicated by the following table from a report of the Division of Statistics in the United States Department of Agriculture.

The following table shows the crop of each State; the amount of cotton purchased by the mills of each State; the amount taken by the mills of one State from the crop of another; and, as far as is disclosed by this investigation, the per cent the mills of each State purchased from the crop of the State in which they are situated, and the per cent of the total purchases taken from other States. As far as can be ascertained, the mills of Kentucky and Missouri buy all of their cotton from other States, and this year (1898-99) the Virginia mills purchased all but about 775 bales from other States. At such mill points as Charlotte, N. C.; Augusta, Columbus, and West Point, Ga.; Eufaula, Ala.; and Columbus, Miss., there are large deliveries by rail and wagon from plantations in adjacent States, and it is impossible to ascertain definitely the extent of the mill purchases from these States.

Crops and mill consumption in 1898-99.

[In commercial bales.]

States.	Crops.	Total mill consumption.	Taken by mills from other States.	Per cent of State's production taken by mills within the State.	Per cent of mill consumption taken from other States.
	Bales.	*Bales.*	*Bales.*		
Alabama	1,176,042	121,128	4,032	10.0	3.3
Arkansas	919,469	3,288	....	0.4	....
Georgia	1,378,731	281,527	10,599	19.7	3.8
Kentucky	50	25,447	25,447	....	100.0
Louisiana	717,747	18,749	....	2.6	....
Mississippi	1,247,128	21,650	....	1.7	....
Missouri	33,120	3,017	3,017	....	100.0
North Carolina	629,620	374,891	71,392	48.2	19.0
South Carolina	1,035,414	466,181	10,953	44.0	2.8
Tennessee	322,820	36,358	22,632	4.3	62.2
Texas	3,363,109	17,156	....	0.5	....
Utah	34	34	....	100.0	....
Virginia	13,990	44,502	43,727	5.5	98.9

There is another feature in the relation of the Southern manufacturer to the market which has generally been overlooked. The great majority of buyers for mills are not familiar with the methods of the trade. They are therefore very greatly influenced by sudden changes in the scale of prices. The effect of this is to raise prices to the producer because of the increased activity of the local demand. An exporter of long experience describes this influence in its effect upon prices to producer and exporter alike as follows:

"The progress of cotton consumption by Southern manufactories has already affected the position of the producer of cotton most favorably, because the buyers of cotton for home mills are not trained merchants, but are usually inexperienced buyers who are affected by the fluctuations of the markets, especially on an advancing scale, and who pay unnecessarily high prices. Exporters have found their trade seriously opposed by the home consumption when the demand of the mills is active. The mills do not seem to advance their prices by one-sixteenths, as exporters do, but by leaps and bounds, and sometimes unnecessarily. There is not that caution in buying cotton for home consumption that is exercised by foreign exporters buying for foreign trade."

Consumption by Southern mills is not only subject to increased competition with the seaports doing an export business, but more recently a form of competition has arisen still nearer home. The same change which revolutionized the methods of handling the grain crop in the central States of the Mississippi Valley has come to pass in the distribution of the cotton crop. Owing largely to the increase of banking facilities in the South and the lien law, which changed the relation of the farmer or renter from dealing with the cotton factor to dealing with the merchant, the crop has been sold more and more in the interior and at local markets and direct either to exporters or to brokers, who in turn sold to New England mills. These local markets receive hourly quotations from New Orleans, New York, and Liverpool, and any change in these large cotton markets is reflected instantly in the small markets throughout the country. This change in the way of selling cotton has been of decided benefit to the farmer or producer. In the Carolina mill district, where the cotton mills are congested in the two Carolinas, the consumption of cotton has so far exceeded the supply that for several years farmers raising cotton within a radius of 40 or 50 miles have received a higher price for their cotton than farmers living where there are no mills. Owing to the short crop last year and the sharp competition among the cotton mills to buy cotton at home where they could save freight charges, or at near-by towns where freight charges were small, the prices of spot cotton in these markets was often actually higher than in New York. Though this was an exceptional year, still the cotton mills in the upper Carolinas recognize that they have to go abroad to buy their supplies. While it is therefore generally conceded that New York regulates the price of cotton in this country, and while it is usually understood that this price, less freight, represents the price of cotton in the different Southern markets, it is evident that this relation has for a considerable period ceased; the price of cotton in the Southern markets tends more and more to maintain a level above that of New York. This would indicate that the strength of the local demand in the South is affecting prices to a degree beyond that which speculative exchanges have been led to anticipate. For the present, as well as for the past several months, the Southern consumer rather than the speculative dealer seems to be in command of the situation. The strictly commercial interests appear to be losing importance in distribution, and for the time being, if not permanently, the producer and the consumer are the chief factors in influencing prices; locally, at least, this is the case. With each widening of the circle of demand by the local mills the producer's price tends to improve. At no distant day the Southern consumer will take a larger volume of cotton than the Northern mills. With each increment in the ratio of American to foreign demand will come an improvement in farm prices of cotton.

4. DOMESTIC AND FOREIGN DISTRIBUTION OF COTTON COMPARED.

Year.	United States crop in bales.	Exports from United States ports.	Consumed by mills in United States.	Per cent exported.	Per cent consumed.
1888-89	6,938,290	4,813,374	2,314,091	69.3	30.7
1889-90	7,311,322	4,813,374	2,390,959	68.1	31.9
1890-91	8,652,597	5,817,990	2,632,023	67.2	32.7
1891-92	9,035,379	5,893,868	2,876,846	65.2	34.8
1892-93	6,700,365	4,473,206	2,431,134	66.7	33.3
1893-94	7,549,817	5,300,458	2,319,688	70.2	29.8
1894-95	9,901,251	6,850,327	2,946,677	69.1	30.9
1895-96	7,161,094	4,701,791	2,504,972	65.6	34.4
1896-97	8,532,075	6,036,713	2,847,351	70.7	29.3
1897-98	10,897,859	7,648,699	3,443,581	70.1	29.9
1898-99	11,189,205	7,546,821	3,553,000	68.3	31.7

"There is scarcely a deep-water harbor of any importance from Eastport, Me., to Brownsville, Tex., or from San Diego, Cal., to Seattle, Wash., through which more or less cotton is not shipped to foreign countries. Likewise, there are few ports of consequence on the border separating the United States from Mexico and from the Dominion of Canada through which cotton is not forwarded by rail to the mills of those countries.

"The table below shows the amount of cotton and the various ports or districts through which it passes to the mills and markets of the outside world, a comparison being made between the movement during the fiscal years ending June 30, 1898 and 1899:"[1]

Domestic movement of the cotton crop of 1898–99 in bales.

From—	To— Gateways: Northern, central, and western.	Seaports. North Atlantic.	 South Atlantic.	 Gulf.	 Pacific.	Mills (direct). Southern.	 Northern.	Southern interior points.	Total.
Alabama	3,068	20,692	454,060	392,426	2,407	42,287	66,806	80,296	
Arkansas	465,414	17,303	200	111,383	1,235	41	73,230	331,967	
Florida			29,827	3,173				2,064	
Georgia		10,378	1,092,518	5,501		41,104	75,156	6,003	
Indian Territory	23,661	28,071		63,616	1,443		19,122	74,945	
Louisiana	18,268	3,348	2,802	773,033	1,367		50,032	30,412	
Mississippi	57,691	33,929	48,509	598,893	500	24,918	288,801	306,238	
Missouri	20,830							12,290	
North Carolina		4,387	316,311			9,996	1,475		
Oklahoma	33,243	34,439		2,628	1,819		12,032	25,167	
South Carolina	83	4,288	456,579			29,930	191	90,714	
Tennessee	5,716	3,890	13,889	9,658		5,419	50,711	221,798	
Texas	137,381	117,483	1,653	2,865,899	129,159	186	66,525	80,870	
Virginia			9,957			13		4,020	
Total	765,355	278,208	2,426,305	4,829,210	137,930	153,924	704,084	1,266,784	10,561,800
Proportion, per cent	7.3	2.6	22.9	45.8	1.3	1.5	6.7	11.9	100

Exports of cotton from each port in 1898 and 1899.

[In commercial bales.]

Customs districts.	Year ended June 30, 1898. Sea-island cotton.	 Upland cotton.	Year ended June 30, 1899. Sea-island cotton	 Upland cotton.
Passamaquoddy, Me		5,043		5,782
Bangor, Me		4,330		5,762
Portland, etc., Me		9,083		14,068
Boston, etc., Mass	3,821	304,299	2,470	398,574
New York, N. Y	11,644	732,117	21,966	623,878
Philadelphia, Pa		19,608		18,052
Baltimore, Md	2,379	217,818	1,752	240,030
Newport News, Va		20,079		33,892
Norfolk, etc., Va		97,676		91,849
Wilmington, N. C		298,086		260,567
Charleston, S. C	4,509	318,915	1,885	236,435
Beaufort, S. C	20	65,814		21,209
Savannah, Ga	15,389	718,575	7,940	609,718
Brunswick, Ga	2,275	242,107	200	253,852
Pensacola, Fla		113,423		215,378
Mobile, Ala		228,032		167,441
New Orleans, La		2,365,395		1,875,027
Galveston, Tex		1,513,815		2,030,233
Laredo, Tex		16,528		7,253
Eagle Pass, Tex		6,335		3,960
El Paso, Tex				200
Nogales, Ariz		590		1,381
San Diego, Cal				27,680
San Francisco, Cal		57,117		48,115
Willamette, Oreg		6,484		
Puget Sound, Wash		73,089		54,437
Pembina, N. Dak				12,635
Port Huron, Mich		18,137		31,834
Detroit, Mich		80,060		44,217
Niagara, N. Y				530
Plattsburg, N. Y				134
St. Albans, Vt		3,508		2,134
Newport, Vt		4,874		882
Total	40,037	7,540,967	36,213	7,337,169

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[1] The Cotton Crop of 1898–99, p. 28.

5. COST OF EXPORT TRANSPORTATION.

"The cost of transportation varies with each locality and the rates of freight, which are always fluctuating. Competitive lines, water transportation, the facility of arranging through freights, each brings its quota to complicate the problem. Distance is by no means a determining factor. It has sometimes cost less to ship cotton from the interior to Liverpool than to the New England mills. Changes are constantly occurring. The new Manchester Canal delivers cotton to the mills 30 cents a bale cheaper on the average than it is delivered ex-ship from Liverpool. Notwithstanding the general cheapening of transportation that has taken place, the percentage of this cost upon the total cost since the decline in the price of cotton is greater than when the staple sold high. It imposes an additional burden on importers and operates with other factors to render the manufacture of the raw material where it is grown more remunerative than it can be at distant points, and this will probably continue to be the case unless some unforeseen cause raises the price of cotton. It may be thought that as the product will finally have to be distributed the cost of transportation will attach as much to the manufactured article as to the raw material. This is a mistake, however. The transportation of cotton costs more than the transportation of goods. Where the first is charged 47 cents per hundredweight, the latter goes through for 30 cents per hundredweight. Some idea of the charges and cost of transporting cotton will be conveyed by the following statement, giving these data regarding its shipment to Liverpool, where more of the crop has been always shipped than elsewhere:

Cost of shipping a 500-pound bale of cotton from the Atlantic slope of the cotton States to Liverpool.

[From the Cotton Plant, pp. 383, 384.]

Items of cost.	Price per pound, 5 cents; first cost of 500-pound bale, $25.	Price per pound, 8 cents; first cost of 500-pound bale, $40.	Price per pound, 11 cents; first cost of 500-pound bale, $55.
Grading .... per bale..	$0.15	$0.15	$0.15
Weighing .... do.....	.07½	.07½	.07½
Drayage .... do.....	.10	.10	.10
Purchasing .... do.....	.50	.50	.50
Compressing and freight to port .... do.....	1.10	1.10	1.10
Port to Liverpool .... do.....	2.00	2.00	2.00
Liverpool dock dues, porterage, customs, insurance, forwarding, cartage to railroad, cartage to mill .... per bale..	.92	.92	.92
Total .... do.....	5.14½	5.14½	5.14½
6 per cent tare	1.50	2.40	3.30
Total cost .... per bale..	6.64½	7.54½	8.44½
Percentage of cost of transportation on total cost	24	18	15

"With the improvements in machinery and increasing skill in its management, manufactured products have a tendency to become cheaper much more rapidly than the raw material out of which they are made. The production of the material depends on natural conditions beyond human control; the manufactured goods are the result of human effort. In 1779 the value of the raw cotton in yarn was as 1 to 8; in 1860 it was as 6¾ to 11½; in 1887 it was as 6¼ to 9⅛. Therefore every burden put on the raw material, such as the above increase in the percentage cost of transportation to total cost, must obstruct manufactures. That it has already done so will be seen by the changes which have taken place in the consumption of cotton by various countries in a series of years, as shown in the table above, of percentages of the cotton crop consumed in each country from 1859 to 1899.

"Manufacturing is evidently becoming less the monopoly of any one nation, and it is equally plain that it tends more and more toward the source of supply. The last observation is supported by what is taking place in India, next in importance to the Southern States as a cotton-producing country. The manufacture has increased there 283 per cent since 1880, and her cotton goods are supplanting those of Great Britain in China and the East. The rapid progress made recently in this direction in the cotton States leads the growers of the staple to hope that it will continue to grow, and that savings secured in the transportation and handling of cotton would open up a market not only for this crop, but for all other crops necessary for the support of a large manufacturing population."

6. COMPETITION AMONG SOUTHERN SEAPORTS.

Possibly no part of the work of handling the cotton crop is more keenly competitive than that done by the large trading houses located in the Gulf and South Atlantic seaports. Beginning with Galveston in the Southwest, there is constant competition with New Orleans. About 65 per cent of the entire Texas crop goes through Galveston and 25 per cent through New Orleans.[1]

Each of these rival ports is eager to control more traffic from the interior. By means of a differential rate from points having common connection with each of these ports, the traffic is apportioned and limits set to the competition which might otherwise be ruinous to the railroads. A few years ago the Dallas freight bureau appealed to the Interstate Commerce Commission to reduce its rate to New Orleans from 75 cents to 65 cents per hundred on cotton. In the examination of facts it appeared that the rate in question was a basis of rating from almost all of the cultivated portion of Texas to New Orleans, and that a change of this basing rate would require a reconstruction of the whole tariff system between the cotton-producing interior and the cotton-trading seaports. The Texas railroad commission meanwhile reduced the rate from Dallas to Galveston from 65 to 60 cents. The effect was to settle, temporarily at least, a question which is always pending in the transportation of cotton—namely, the question of controlling competition of seaports in their efforts to get more favorable rates from railroads reaching back into interior towns.

East of the Mississippi River this competition of seaports is more or less completely under the limitations mentioned by the Southeastern association of railroads and steamship lines, whose object is to check competition to the extent of protecting the revenues of the transporting lines. This association practically does this by pooling traffic among roads and ports by means of differential rates and of penalties for violation by the principle of apportionment of business.

There are, however, new conditions arising from time to time that break into the system of apportioning tonnage and territory. The chief cause of disturbance arises from some seaboard road which succeeds in diverting business from the interior by way of those ports to the Northeast. The competition of the Morgan Line from Galveston in league with a Kansas City rail line last year, and the competition of the Hollander steamship line in cooperation with the Mobile and Ohio rail line, both contributed to the unsettling of the control upon competitive lines in marketing cotton through the seaports.

In spite of the associated efforts of the railroads reaching these ports there is still a very high degree of competition which tends constantly to lower the cotton rates to the seaboard. With reference to competition of the South Atlantic ports—Portsmouth, Wilmington, Charleston, and Savannah—this is becoming livelier every year. The advantage lies not so much as was the case in former years, in influence with railroad traffic managers and cut rates as it does in the superior business capabilities involved in the contest; it is simply a hard study from day to day upon equal ground. Of course there are exceptions where some firms may get the advantage of others in regard to rates, but such exceptions are unfair and are becoming more rare every year. A firm which handles a quarter of a million of bales of cotton a year testifies that they have had no advantage in rates at their port of business from the beginning of their business over 30 years ago up to the present time, but have always paid the same rates without rebates which one doing the tenth of their business could as easily obtain. "There are now no rebates of any description whatever paid us. We believe it is the policy of the Southern road and the Atlantic Coast Line road to maintain rates. We understand that they have not been maintained on other systems, but of this we are not fully informed."[2]

There is here a fact of much significance in the question of local rates on cotton in the South Atlantic States. Within the territory of the Southwestern Freight Association—a most efficient traffic association of its kind—it has been found impossible to prevent the practice of giving discriminative rates. The power of this thoroughly organized body, with all its penalties, has not been able to prevent members from cutting rates to increase their proportion of traffic when dissatisfied with their allotted proportion.[1] Hence it is more than doubtful whether pooling under any less efficient form of control could prevent discrimination in rates under such inducements to gain a larger percentage of traffic. As long as apportionment of traffic is made on the basis of the quantity actually handled by a given road, there will be a sufficient inducement to cut rates to increase its proportion. This is especially so when the railroad is a new competitor in the field, as is the case with the Seaboard Air Line in much of the cotton territory. The bearing of the entire question of rates lies in the fact that this competition is largely on through rates northward and rates to the seaboard, thereby tending to leave less local cotton for consumption by the mills and to prevent local rates from being reduced correspondingly. The State railway authorities can devote themselves to no more pertinent question than this, because the State which does not protect its industries from undue discriminations will find that industries generally concentrate at the points of greatest exemptions from exactions of those economic agencies on which they are dependent.

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[1] Interstate Commerce Commission: Dallas Freight Bureau *v.* Texas Pacific Railway Company, June 23, 1898.

[2] Report of the Railroad Commissioners of South Carolina, 1899, p. 29, Complaint No. 3, establishes the fact of such failure to maintain rates.

IV.—THE EXPENSES OF DISTRIBUTING THE COTTON CROP.

1. APPROXIMATE COST OF REACHING THE CONSUMER.

The cotton crop goes to three classes of consumers, namely, the local mill in the South, to the Northern and Western mills, and foreign mills. To each of these classes of shipments a different expense attaches. At most places the farmer who delivers direct to the mill has no expenses of marketing. At other places weighing enters as an item of expense, though a very small one—10 to 25 cents per bale. Where the local mill demand has to compete with the outside demand the manufacturer pays a small brokerage fee and storage charge, to be surer of a supply and to save freight from other points of production.

A rough average of all expenses of putting these different portions of the crop into the hands of the respective consumers is given herewith:[2]

	Per bale.
A. From farm to local mill	$0 to 0.50
B. From farm to Northern or Western mill	3.00
C. From farm to foreign mill	5 to 7.50

Out of a crop of 10,500,000 bales, if the South takes 1,500,000, at the above rate the cost of Southern distribution is $750,000. About 2,000,000 bales go to Northern and Western mills, at an expense of $6,000,000. The 7,000,000 bales for foreign account, at the lowest figure of expense of $5 per bale, would cost $35,000,000. The gross expense incurred in distributing the cotton crop from farm to factory amounts to $41,750,000 on this basis of calculation. In a rough way this represents the difference between what the consumer pays and the producer receives for the entire crop. Still, this may be too low an estimate.

For that larger portion of the crop which goes to Northern, Western, and foreign mills it might be safe to assume that an average of 1 cent per pound would cover cost from producer to consumer. On this basis the cost of distributing this share of the cotton crop would be $45,000,000. On the same basis the exports of cotton consumed by foreign countries would be distributed at a cost of $35,000,000. It may well be claimed that this distribution between foreign and domestic supplies is too low for foreign and too high for domestic cotton, because expenses of carriage per unit of product invariably tend to diminish with distance; nevertheless, the average of 1 cent per pound seems a fair average for approximating the cost of distributing this portion of the crop.

The total value of the cotton crop for 1898-99 was estimated at $305,467,041. This estimation is based on the average price per pound for the first 6 months of the cotton year after beginning with September 1, at the principal markets of each State and Territory. This average price fairly represents prices realized by producers at the respective markets in different States for middling upland cotton. A separate estimate is made for sea-island cotton.

If the gross cost for distributing the crop be taken at $45,750,000 it thus appears that distribution costs an average of 15 per cent of the value of cotton to producers. The total cost to consumers would on this calculation approximately be $351,217,041.

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[1] Industrial Commission, Transportation, p. 351.

[2] Estimates furnished through kindness of Secretary W. F. Alexander, of the Augusta Exchange and Board of Trade.

The cost of marketing cotton varies greatly with the financial condition of the producer. The farmer who has received advances of cash or supplies from factor or merchant is said to pay on the average a sum of charges per bale amounting to $1.93, or about 7 per cent on the net value of the crop to the farmer, or half a cent per pound of lint. Another excellent authority says that the cost of marketing cotton produced by planters on advances received from factors averages $2 per bale. Much the largest part of the crop is said to go directly into the hands of such factors or merchants who have advanced capital to the grower.

It is evident that much of this so-called "cost of marketing cotton" is not actually chargeable to commercial expenses, but is really the repayment of interest and risk charges on capital borrowed by the producer from the merchant or factor. This interest, at the ordinary rate on such borrowings plus the risk rate usually included in the interest rate, is apparently not part of the cost of marketing, but really part of the cost of production, which is settled for at the time of marketing the crop.

The sales of cotton to Northern and Western mills are not so economically made as those either to foreign or Southern mills. These sales generally are loaded with a commission to the broker or factor making the sale, averaging, generally, 50 cents per bale. The freight, of course, varies with the distance. A rough average would be $2.50 per bale to the leading Northern centers of consumption, making a total of $3 per bale, or 60 cents per hundred pounds.

On a basis of 8 cents to the consumer the commercial cost would figure out as follows: Fifty cents commission per bale of 500 pounds, at 8 cents, would be 1¼ per cent, or one-tenth of a cent per pound.

Expenses of local transportation from producer to North Carolina mills.

[On basis of $8.50 per 100 pounds at mill.]

From—	To—	Value at mill.	Rate per 100 pounds.	Net to producer.	Proportion to railroad.	Proportion to producer.
			Cents.		*Per cent.*	*Per cent.*
Maxton	Mill R	$8.50	31	$8.19	3.6	96.4
Jonesboro	do	8.50	22	8.28	2.6	97.4
Raleigh	do	8.50	32	8.18	3.8	96.2
Wilmington	do	8.50	32	8.18	3.8	96.2
Goldston	do	8.50	17	8.33	2.0	98.0
Charlotte	Mill J	8.50	50	8.00	5.9	94.1

These percentages show that the cost of transportation to a mill of possibly 10 years' standing, consuming several thousand bales annually, and which gets substantially all of its cotton by rail, varies from 2 to 6 per cent of the cost of the raw material for railway freights. In other words, the cost of carriage between the farm and the factory by rail direct without any commissions, as was the case here, is never more than a year's interest on the cost of the raw material.

Expenses of local buying at Georgia and Alabama mills.

Cash price paid producer per 500-pound bale, at 9 cents	$45.00
Storage (1 month) and weighing paid local warehouseman	$0.25
Salary of buyer (arranged), per bale	.10
Drayage from warehouse to mill	.10
Total additional expenses	.45
Gross cost to consumer	45.45

The expenses are but 1 per cent of the consumer's cost; the producer gets 99 per cent of this value.

Another place in Alabama is reported where the only expense is 15 cents per bale for weighing. At this mill 3,000 bales are consumed annually. In order to hold this cotton the mill must pay the full New York price for it, all of which, less the weighing charges, goes to the producer. In this instance the expenses of marketing are but one-third of 1 per cent, and the producer gets the balance—99⅔ per cent of the price to the consumer. As a rule, however, the deliveries by wagon at mills do not appear to be subject to any weighing charges except where there is a public weigher appointed. Without this charge the producer's price and the consumer's cost are identical.

2. RELATION OF FARM PRICES TO FREIGHT CHARGES.

As already indicated, the cotton trade from the farm to the factory is generally under the stress of competition. Hence the ratio of railway charges to the value of the raw material is small. The ratio varies greatly with the farm price, however. The lower the farm price of cotton the higher the proportion paid for transportation. From Waycross, Ga., for example, to Savannah the distance is nearly 100 miles (97 miles); the rate on cotton is 25 cents per 100 pounds. At 7 cents per pound the freight is 3.6 per cent of the price paid to producers. At 8 cents a pound the freight is 3.1 per cent of its value to the producer. At 9 cents a pound the freight is 2.8 per cent.

This shows the relation between the price of cotton to the producer and the proportion that goes to transportation. The rise in price to producer results in his getting an increased proportion and in the railway's getting a decreased proportion. A steadily downward price, on the other hand, tends to increase the share of transportation and to reduce the share of the producer on the basis of the farm value of the cotton delivered at the railway station.

Five-cent cotton yields the railroad twice the proportion of the farm value that 10-cent cotton does.

Farm price of cotton.	Freight per 100 pounds.	Percentage of farm value for transportation.
	Cents.	*Per cent.*
5 cents per pound	25	5.0
7 cents per pound	25	3.6
8 cents per pound	25	3.1
9 cents per pound	25	2.8
10 cents per pound	25	2.5

Proportion of consumer's cost of cotton to railroad and to producer.

[On basis of $8.50 per 100 pounds (New York spot) and North Carolina standard freight rates.]

Distance from North Carolina mills.	Value to consumer of 500-pound bale at New York spot price.	Rate of freight per 500-pound bale.	Net to producer.	Proportion to railroad.	Proportion to producer.
				Per cent.	*Per cent.*
5 miles	$42.50	$0.45	$42.05	1.1	98.9
10 miles	42.50	.45	42.05	1.1	98.9
15 miles	42.50	.55	41.95	1.3	98.7
20 miles	42.50	.65	41.85	1.5	98.5
25 miles	42.50	.70	41.80	1.6	98.4
30 miles	42.50	.75	41.75	1.8	98.2
35 miles	42.50	.80	41.70	1.9	98.1
40 miles	42.50	.85	41.65	2.0	98.0
45 miles	42.50	.90	41.60	2.1	97.9
50 miles	42.50	.95	41.55	2.2	97.8
55 miles	42.50	1.00	41.50	2.4	97.6
60 miles	42.50	1.05	41.45	2.5	97.5
65 miles	42.50	1.10	41.40	2.6	97.4
70 miles	42.50	1.10	41.40	2.6	97.4
75 miles	42.50	1.15	41.35	2.7	97.3
80 miles	42.50	1.15	41.35	2.7	97.3
85 miles	42.50	1.20	41.30	2.8	97.2
90 miles	42.50	1.20	41.30	2.8	97.2
95 miles	42.50	1.25	41.25	2.9	97.1
100 miles	42.50	1.25	41.25	2.9	97.1
110 miles	42.50	1.30	41.20	3.1	96.9
120 miles	42.50	1.35	41.15	3.2	96.8
130 miles	42.50	1.40	41.10	3.3	96.7
140 miles	42.50	1.45	41.05	3.4	96.6
150 miles	42.50	1.50	41.00	3.5	96.5
160 miles	42.50	1.55	40.95	3.6	96.4
170 miles	42.50	1.60	40.90	3.8	96.2
180 miles	42.50	1.65	40.85	3.9	96.1
190 miles	42.50	1.70	40.80	4.0	96.0
200 miles	42.50	1.75	40.75	4.1	95.9

One of the peculiarities of the distribution of cotton is the necessity to which the local mills are put of bringing considerable quantities of the staple from distant States, even though the State in which the mill is located produces far more than its mills consume. North Carolina mills consumed 374,891 bales in 1898–99, 79,392 bales of which were taken from other States, while the crop of North Carolina was 629,620 bales. Of course this is easily explained by recalling that the manufacturing section is in the central part of the State and the main cotton belt lies in the eastern section, nearer to the seaports of Wilmington and Norfolk. The shortest rail route has the advantage, and the through rate to the seaboard may be lower than the local rate to the mills. Hence for some time the movement must be divided, the piedmont and adjacent portion of the crop going to the mills and the more eastern section supplying the seaport towns for Northern and foreign consumption.

The following statement brings out the distributive features in the two movements—the movements to mills from near-by and remote sources. The value, it is seen, to the consumer or mill is apportioned among distributers and producers quite differently in the case of cotton shipped locally to North Carolina mills and that sent from Mississippi points:

Expenses of interstate distribution of cotton in 500-pound bales to North Carolina mills.

From—	To—	Freight per bale.	All other expenses.	Total expenses.	Consumer's cost at 8 cents per pound.	Net for producer.	Proportion for expenses of distribution.	Proportion for producer.
							Per ct.	*Per ct.*
Charleston, S. C.	North Carolina mills	$1.15	$0.50	$1.65	$40.00	$38.35	4.1	95.9
Kershaw, S. C.	do	1.30	.50	1.80	40.00	38.20	4.5	95.5
Alabama and Mississippi points.	do	3.15	.50	3.65	40.00	36.35	9.1	90.9

3. EXPENSES OF MARKETING COTTON THROUGH NORTHERN GATEWAYS.

Among the several gateways through which cotton passes after leaving the cotton belt on its way to Northern and Western distribution, St. Louis ranks among the first. The gross receipts for 1898–99 amounted to almost a million bales. In the following table the net receipts are the amount of cotton handled by St. Louis factors, and represents nearly double the amount handled in 1895–96. A considerable amount of cotton bought by St. Louis factors at interior points is shipped out on through bills of lading. This movement, while belonging to the actual business of the place, is not indicated in the figures of the local receipts. These receipts, aggregating a million bales, are received, mainly, from Arkansas and Texas, which together yield for this market 700,000 bales. Less than 12,000 bales are received by river boats.

In the statement following the prices used are those of 1899, which were comparatively low, and those of 1900, which are high compared with prices of the last 6 years. Although there is a report of cotton being forwarded from here to Japan, it was cotton passing through St. Louis and does not originate here. The reason they can not ship cotton from St. Louis is that the rate of freight from St. Louis is $1.35 per 100 pounds to Japanese and Chinese ports, the same as it is from Houston or any other point in Texas, and the freight to St. Louis would be so much out of the seller's pocket, which he could not stand, as the margin of profit is small.

Itemized expenses of marketing cotton at St. Louis.[1]

Date of sale.	Kind and grade of product.	Consumer paid.		Producer received per bale.	Combined expenses of distribution, between producer and consumer, per bale.		Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.	Distance from St. Louis.
		Per pound	Per bale.[2]						
		Cents.					*P. ct.*	*P. ct.*	*Miles.*
August, 1899	Cotton, middling.	5¾	$28.75	$21.86	Storage, weighing, and sampling Fire insurance 2½ per cent commission for selling 50 cents per 100 pounds, freight from Knoxville, Ark Total	$0.50 .18 .71 2.50 3.89	14	86	433
May, 1900	do	9½	47.50	43.13	Storage, weighing, and sampling Fire insurance 2½ per cent commission for selling 50 cents per 100 pounds, freight from Knoxville, Ark Total	.50 .18 1.19 2.50 4.37	9	91	433
August, 1899	do	5¾	28.75	23.86	Storage, weighing, and sampling Fire insurance 2½ per cent commission for selling 70 cents per 100 pounds, freight f.om Waco, Tex Total	.50 .18 .71 3.50 4.89	17	83	867
May, 1900	do	9½	47.50	42.13	Storage, weighing, and sampling Fire insurance 2½ per cent commission for selling 70 cents per 100 pounds, freight from Waco, Tex Total	.50 .18 1.19 3.50 5.37	13	87	867

[1] Reported by Mr. E. S. Tompkins, special agent, St. Louis.
[2] Of 500 pounds.

4. EXPENSES OF MARKETING COTTON AT SEAPORTS.

In handling cotton, in the States of largest production especially, almost every town of any consequence enjoys facilities for local compressing, in which case the local or nearest compress handles the cotton on a through bill of lading, both for domestic or export shipment, thus saving port charges and cotton merchants' commission. This system tends to dispense with the middlemen. Compressed-cotton rates are reduced by the compression charge or thereabout. The charge for compression is 40 to 50 cents per bale. "Cotton," says the Interstate Commerce Commission, "is, almost without exception, compressed before it is transported any considerable distance. The cost of compression is 50 cents per bale, and is paid by the originating carrier. This compression is for the interest of the railroad company in this, that when compressed it can be much more conveniently and cheaply transported than when uncompressed. It is also to the interest of the shipper, since cotton which is subsequently transported by water—and all that going to Galveston or New Orleans is—takes, when compressed to a sufficient density, an ocean rate 10 cents per 100 pounds lower than the rate upon uncompressed cotton."

The following schedule of rates on cotton in Texas is furnished by the Texas railroad commission from 22 points of origin in the cotton territory to Houston and Galveston, Galveston being the seaport through which the main portion (65 per cent) of the Texas crop goes. About 25 per cent goes to port at New Orleans, and 10 per cent by all-rail route to New York and New England points, the last being, no doubt, carried by cars which would otherwise have to come back empty:

Rates on cotton in bales from points in Texas.

[Rates, in cents per 100 pounds, to Houston and Galveston, from stations on the International and Great Northern Railroad north of Houston to Longview.]

From—	To— Houston.		To— Galveston.		From—	To— Houston.		To— Galveston.	
	Miles.	Rate.	Miles.	Rate.		Miles.	Rate.	Miles.	Rate.
Cross Timbers	5	15	55	21	Crockett	113	43	163	49
Spring	23	15	73	21	Grapeland	126	46	176	52
Conroe	39	20	89	26	Elkhart	139	48	189	54
Willis	47	24	97	30	Palestine	151	51	201	57
Waverly	55	25	105	31	Neches	162	53	212	59
Phelps	67	29	117	35	Jacksonville	178	54	228	60
Huntsville	75	31	125	37	Troupe	196	54	246	60
Dodge	71	31	121	37	Arp	203	54	253	60
Riverside	79	33	129	39	Overton	210	54	260	60
Trinity	86	37	136	43	Kilgore	220	54	270	60
Lovelady	100	40	150	46	Longview	232	54	282	60

[Rates, in cents per 100 pounds, to Houston and Galveston, from stations on the Galveston, Harrisburg and San Antonio Railway, main line, west of Houston to San Antonio, inclusive.]

From—	To— Houston.		To— Galveston.		From—	To— Houston.		To— Galveston.	
	Miles.	Rate.	Miles.	Rate.		Miles.	Rate.	Miles.	Rate.
Tewena[1]	5	8	55	14	Weimar	93	39	130	45
Stella[1]	10	8	60	14	Schulenburg *a*	101	39	138	45
Lotus[1]	15	10	65	16	Engle	107	42	144	48
Missouri City[1]	18	10	63	16	Flatonia	113	43	150	49
Stafford[1]	20	10	62	16	Pierson	119	44	156	50
Sugarland[1]	25	10	57	16	Waelder	125	45	162	51
Ellis[1]	26	10	58	16	Sandy Fork	133	47	169	53
Sartartia[1]	27	10	59	16	Harwood	138	48	174	54
Harlem[1]	30	10	62	16	Ivy	141	49	178	55
Richmond[2]	34	10	63	15	Luling	147	50	184	56
Rosenberg[1]	36	12	66	18	Sullivan	154	51	190	57
Randon[1]	43	15	73	21	Kingsbury	158	52	195	58
Natili[1]	48	17	77	23	Ilka	164	53	201	59
East Bernard[1]	52	20	82	26	Seguin	168	54	205	60
Nottawa[1]	57	20	87	26	Hilda	174	54	210	60
Lissie[1]	62	22	92	28	Marion	179	54	215	60
Eagle Lake[1]	62	25	99	31	Cibolo	184	54	221	60
Ramsey	68	29	101	35	Schertz	187	54	223	60
Alleyton[1]	75	30	111	36	Converse	190	54	227	60
Columbus[1]	78	32	115	38	Kirby	195	54	232	60
Glidden	81	35	118	41	San Antonio	202	54	239	60
Borden	87	37	124	43					

[1] Rates established by exception 5, section 2 of the tariff.
[2] Rates established by exception 4, section 2 of the tariff.

The competition of railroads and seaports has been so active in the cotton trade that many expenses once considered legitimate are no longer a feature of the movement of this crop. For 1 cent per pound many interior towns can put cotton into the ordinary course of transit and deliver it through the port of shipment in England or on the Continent at the consumer's mill. Formerly the commission merchant profited by handling cotton at various stages, but now a commission of one-sixteenth of a cent to the local buyer at the point of shipment, and another of the same rate for the exporter, together with insurance and freight, comprise about all that the trade can manage to get out of the value paid by the consumer. The producer gets the entire balance.

Cotton shipped on commission to port, and there retained as part of the country's visible supply in storage, of course incurs additional charges. Take the shipments to Mobile, Ala., from Selma, a distance of 165 miles. We may figure the expenses of marketing here on the basis of 9-cent cotton, or $45 per bale of 500 pounds. The various charges are as follows for cotton destined for export:

Commissions, 2½ per cent	$1.13
Freight (compressed rate) to Mobile	.75
Other expenses, including drayage, weighing and checking, and one month's storage, insurance, and sampling	.90
Total charges per bale	2.78
Total charges per 100 pounds	.55⅗

The actual expenses in question are, therefore, but little over half a cent per pound. These expenses vary according to the freight charge; the handling by two different parties—the receiver or commission merchant and the exporter, to whom the former sells his consignment. The charges are given as follows at this particular port:

Compressing	per bale	$0.50
Reweighing	do	.25
Storage per month	do	.10
Brokerage	do	.35
Drayage to dock	do	.20
Total exporters' charges	do	1.40
Total exporters' charges per 100 pounds		.28

This charge amounts to a little more than one-fourth of a cent per pound.

The following statements of expenses of marketing cotton at and through the port of Mobile from Alabama, Florida, and Mississippi points have been prepared to show the burden of expense borne by every 100 pounds of cotton.[1] These figures represent the older method of handling cotton through a port consignee, rather than the newer methods in which the producer and consumer come closer together and the trade is forced to be content with a small brokerage.

Itemized expenses of marketing cotton at Mobile, Ala.

Distances.	Main expenses per $45-bale; basis 9 cents per pound.[1]		Total per 100 pounds.
From Selma to Mobile, Ala. (165 miles)[2]	Commissions (2½ per cent)	$1.13	$0.55⅗
	Freight	.75	
	Other expenses	.90	
	Total	2.78	
From Greenville to Mobile, Ala. (140 miles)	Commissions (2½ per cent)	1.13	.75
	Freight	1.90	
	Other expenses	.72	
	Total	3.75	
From Meridian, Miss., to Mobile, Ala. (110 miles)	Commissions (2½ per cent)	1.13	.62
	Freight	1.25	
	Other expenses	.72	
	Total	3.10	

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[1] Information furnished by Mr. H. A. Forchheimer, special agent, Mobile, Ala.

Itemized expenses of marketing cotton at Mobile, Ala.—Continued.

Distances.	Shipping line.	Main items of expense per bale.		Expenses per 100 pounds.
From Portland, on Alabama River, to Mobile, Ala. (200 miles).	Alabama River Steamboat Line.	Commissions	$1.13	$0.55⅗
		Freight	.75	
		Expenses	.90	
		Total	2.78	
From Geneva, on Chattahoochee River, to Mobile, Ala. (200 miles).	Chattahoochee River Steamboat Line, S. F. and W. Rwy. and L. & N. R. R.	Commissions	1.13	.80
		Freight	1.75	
		Expenses	1.12	
		Total	4.00	
From Catherine (Southern Rwy.) to Mobile, Ala. (145 miles).[3]	Southern Railway	Commissions	1.13	.62
		Freight	1.25	
		Expenses	.72	
		Total	3.10	
From Evergreen to Mobile, Ala. (135 miles).	L. & N. R. R	Commissions	1.13	.72
		Freight	1.75	
		Other expenses	.72	
		Total	3.60	
From Marianna, Fla., to Mobile, Ala. (165 miles).	S. F. and W. Rwy and L. & N. R. R.	Commission	1.13	.76
		Freight	2.00	
		Other expenses	.72	
		Total	3.85	
From Thomasville, to Mobile, Ala. (100 miles).	Southern Rwy	Commissions	1.13	.62
		Freight	1.25	
		Other expenses	.72	
		Total	3.10	

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[1] Figured on basis of one month's storage in cotton warehouse, bales of 500 pounds each, and at 9 cents per pound for middling cotton.

[2] No uncompressed cotton received from Selma; all export cotton on through bill of landing.

[3] Catherine, Ala., on the Southern Railway, is the most northern point in Alabama shipping cotton to cotton commission merchants in Mobile for sale on basis of above charges and expenses.

COTTON CHARGES, 1899-1900, ON MOBILE COTTON EXCHANGE.

The following tariff of charges has been reported to the committee on cotton and port charges of the Cotton Exchange, and will probably prevail at this port the ensuing year:

FACTORS' CHARGES.

Wharfage	per bale	$0.08
Drayage	do	.45
Weighing and checking	do	
Storage. 1 month	do	
Storage, progressive, per month	do	.05
Storage, progressive, on rejection, per month	do	.10
Picking damaged cotton, drayage, and labor	do	1.25
Wantages	per band	.05

BUYERS' CHARGES.

Compressing	per bale	.50
Shipping charges	do	.35
Storage on head marks or ship marks to commence on date of factors' turn-down order, per month or fractional part thereof	per bale	.10
Brokerage	do	.35
Reweighing	do	.08
Wharfage on exports	do	.04
Extra ties	per band	.05
Supervision	per bale	.01

NOTE.—Compressing and shipping charges are subject to change, and will be governed by the rates ruling at competing markets.

When cotton is shipped within 10 days from date of factors' turn-down order, no charge for storage will be made.

CHARGES TO VESSELS.

Stowing, steam, foreign	per bale	$0.35 to $0.40
Stowing, coastwise	do	.25 to .30
Towage, per registered ton		.23 to .31
Harbor dues		None.
Wharfage		None.
Quarantine inspection		3.00 to 15.00

Comparative standard rates on cotton by distances, in Texas, Mississippi, and North Carolina.

[Maximum rates per 100 pounds.]

Texas.		Mississippi.		North Carolina.	
Distance (miles).	Rate in cents per 100 pounds.	Distance (miles).	Rate in cents per 100 pounds.	Distance (miles).	Rate in cents per 100 pounds.
		5	10	5	5
		10	10	10	9
		15	11	11	11
		20	13	20	13
		25	14	25	14
30	15	30	15	30	15
35	18	35	16	35	16
40	20	40	17	40	17
45	20	45	18	45	18
50	24	50	19	50	19
55	25	55	20	55	20
60	26	60	21	60	21
65	27	65	21	65	22
70	29	70	22	70	22
75	31	75	22	75	23
80	33	80	23	80	23
85	35	85	23	85	24
90	37	90	24	90	24
95	39	95	24	95	25
100	40	100	25	100	25
110	42	110	26	110	26
120	44	120	27	120	27
130	46	130	28	130	28
140	48	140	29	140	29
150	50	150	30	150	30
160	52	160	30	160	31
170	54	170	31	170	32
175	54	175	32		
180	54	180	32	180	33
190	54	190	33	190	34
200	54	200	34	200	35

On the basis of the following rates it can easily be figured what the expense is to ship cotton to seaboard.

Statement showing rates on cotton, uncompressed, C. L. from the following points to Charleston, S. C., Charlotte, N. C., Wilmington, N. C., Norfolk, Va., and West Point, Va.:[1]

From—	To—	Distance.	Rate per 100 pounds.	Route.
		Miles.	*Cents.*	
Augusta, Ga	Charleston, S. C	137	22	Southern Rwy.
Chester, S. C	Charlotte, N. C	44	23 (Class J.)	Seaboard Air Line.
Kershaw, S C	do	66	26	Atlantic Coast Line.
Florence, S. C	Wilmington, N. C	110	27	Do.
Weldon, N. C	Norfolk, Va	80	31	Seaboard Air Line.
Oxford, N. C	West Point, Va	167	39	Southern Rwy.
Raleigh, N. C	Norfolk, Va	177	39	Seaboard Air Line.

Statement showing rates on cotton from points shown below to Mobile, Ala., New Orleans, La., Houston, Tex., and Memphis, Tenn.[1]

[1] Furnished by kindness of Hon. J. M. Smith, auditor of the Interstate Commerce Commission.

From—	To Mobile, Ala.					To New Orleans, La.				
	Distance.	Per bale, local.		Per 100 pounds, export.		Distance.	Per bale, local.		Per 100 pounds, export.	
		Compressed.	Uncompressed.	Compressed.	Uncompressed.		Compressed.	Uncompressed.	Compressed.	Uncompressed.
	Miles.					*Miles.*				
Meridian, Miss	135	$1.40	$1.90	$0.31	$0.41	196	$1.65	$2.15	$0.36	$0.46
Logansport, La										
Shreveport, La										
Holly Springs, Miss										
Jackson, Miss						183	1.65	2.15	.36	
Texarkana, Ark						397		*a*.60		
Augusta, Ga						667		*a*.58		

From—	To Houston, Tex.			To Memphis, Tenn.		Route.
	Distance.	Compressed.	Uncompressed.	Distance.	Uncompressed.	
	Miles.			*Miles.*		
Meridian, Miss						Mobile and Ohio R. R.
Logansport, La	192		$0.54			Houston, East and West Texas Rwy.
Shreveport, La	232	$0.29				St. Louis Southwestern Rwy.
Holly Springs, Miss				45	$1.00	Kansas City, Memphis and Birmingham R. R.
Jackson, Miss						Illinois Central R. R.
Texarkana, Ark						St. Louis Southwestern Rwy.
Augusta, Ga						Southern Rwy.

a Per 100 pounds.

5. EXPENSE OF SHIPPING COTTON TO JAPAN AND TO SAXONY.

(1) *Japan.*—It is worth while presenting a particular case of exporting cotton to Japan by way of Texas ports to show the close margin on which such transactions are made. The growing trade in cotton with Japan has heretofore gone very largely by overland routes to the Pacific. In 1898-99 there were exported to Japan 182,734 bales by way of the 5 Pacific ports of San Diego, San Francisco, Tacoma, Portland, and Seattle. Recently, however, considerable amounts have been shipped through from the interior of Texas, mostly by Houston exporters, from points taking the same freight rate as Houston.

There are three elements of expense incident to such shipments, viz, freight, compressing, and classing, weighing, and exchange.

Take, for instance, a bale of cotton bought at the gin for, say, 9 cents per pound, with charge for freight of $1.35 per 100 pounds, charge for compressing of 10 cents per 100 pounds, and charge of 5 cents per 100 pounds for classing, weighing, and exchange, and the total cost to the shipper would be $10.50 per 100 pounds, or 10½ cents per pound. He would probably ask 10⅝ cents per pound to the purchaser in Japan, thus making a profit of one-eighth of a cent. Hence, as will be seen, the producer gets 9 cents per pound for the ginned cotton and the consumer pays 10⅝ cents in Japan, leaving a margin of 12½ cents per 100 pounds to the exporter.

On the basis of a 500-pound bale the distributing and producing interests would share as follows:

Gross cost of 500 pounds to Japanese consumer, at 10⅝ cents per pound	$53.12½
Price paid Texas producer, at 9 cents per pound	45.00
Balance to distribution agencies	8.12½

Proportion of cost in Japan going to producer	per cent	94.7
Proportion of cost in Japan going to distributer	do	5.3
		100

This may not seem credible, but it is none the less the fact that the producer's portion of the Japanese value of this cotton sent from the interior of Texas is greater than it is on a given shipment of cotton from Charlotte, N. C., to a station 83 miles distant in the same State.

(2) *Expenses of sending cotton to Chemnitz, Saxony.*—The following statement shows the expenses of sending 430 bales American cotton shipped October, 1900, from New Orleans to Hamburg, thence to Chemnitz:[1]

430 bales gross, 224,058 pounds, at 6⅞ cents	$15,403.98
Charges in New Orleans, carriage, pressing, commission (2½ per cent), Marine Insurance, $13,500, 1⅛ per cent	1,005.82
	16,409.80

	£	s.	d.
60 days sight on London ($4.82½=£1)	3,400	19	10
Bankers' commission (1¼ per cent)	8	10	00
	3,409	9	10

	Marks.
Due January 6, at 20.50 marks	69,894.60
Freight, New Orleans-Hamburg-Riesa(Elbe)-Chemnitz	5,847.55
Expenses in Hamburg	412.20
Petty charges	271.00
Brokerage	87.00
	76,512.35

	Pounds.
Gross	224,058
6 per cent tare	13,443
Net	210,615

This statement analyzed shows that the gross cost of this shipment from New Orleans to Chemnitz was 76,512.35 marks. Reduced to its United States equivalent, this amounts to $18,217.22. Deducting from this the cost of the cotton at New Orleans, we have $2,813.24 as expenses incurred from New Orleans to Chemnitz. Dividing this total expense by the gross weight of the cotton, we find that the expense of the entire transaction between New Orleans and Chemnitz was 1¼ cents per pound.

This was a direct shipment. If the consumer at Chemnitz buys the cotton from a broker in Liverpool or Bremen, he has to pay an additional expense of 2 per cent commission, extra freight, mending (adding heavy canvas to save weight in cotton). The freight from interior points, as Huntsville, Ala., by way of Baltimore is between 90 cents and $1 per 100. The German consumer is desirous of buying more directly under supervision of the Government to guarantee grades, enforce standards of bagging, etc. If this were done, he could pay the producer considerably more.

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[1] Statement furnished by the American vice-consul, J. J. Monaghan, Chemnitz, Germany.

6. WHAT MAKES THE PRICE OF COTTON.

The truism that supply and demand make the price of a commodity always needs scrutiny in order to see within what limits the statement is true of any particular commodity, for each particular commodity has its own method of being marketed. Some commodities are supplied automatically; others come by fits and starts in season and not at all out of season. Agricultural products are so different in their nature and marketable character that the price of each of them requires an explanation of its own. Cotton and strawberries, for example, are subject to the same general conditions of supply and demand, but the market price or farm price of each is constantly influenced by a very different set of peculiar conditions that go far toward an explanation of the price at any particular time. Cotton is permanent and quite universal in marketability, so that distance to points of consumption expressed in freight charges accounts for difference in prices; but with strawberries, local and quite variable in conditions often change the price from day to day. Their perishable character counts largely in their value. So that the same factors that explain the course of the cotton market could not explain the course of the strawberry market. They both satisfy different kinds of consumption, both are subject to different conditions of production; they follow the same general economic principle, but the process is very different in each.

The most general answer to this question of price is this, that the price of cotton is determined at any time by the consumer's estimation of its value to him as the raw material of manufacture. This is the utmost that the dealer can get for it; it is the maximum that the producer can hope to obtain for it. It makes no difference what it has cost the producer to grow and market any particular portion of the cotton there offered. The Manchester consumer's estimate entertains no thought of the difference in the cost of producing cotton in India, Texas, or Egypt. His concern is to pay just as little as the competition of these cottons in the market will require him to pay, and no more than will leave him a profit for his manufactured product.

The price of cotton at any particular time is, therefore, made by two sets of competitors. The competition of sellers brings prices down to a minimum; when the consumer believes that point to be reached, he buys because he sees a margin of profit in that price plus the expenses of manufacture. This price of cotton is the minimum limit at which demand and supply will meet in the same market. If it goes lower, presumably the seller will withhold his cotton from market and then there can be no sale; at that price demand and supply do not respond to each other. The competition of sellers has succeeded in supplying the demand until the demand falls below the level of profitable selling. This limit of profitable selling is the minimum limit to the price of cotton at any particular time.

The maximum limit is reached by the competition of buyers or consumers. When consumers see an extraordinary profit in the manufacture of cotton goods, as was the case with the plaid mills of the South in the years 1888-1890, the prices of raw cotton for the time being rose, but the influx of capital and the increase of competing mills at the rate of hundreds in a year soon reduced the margin of profits on that species of product and thereby fixed a maximum limit for the price of the raw material. This maximum is always the price of the raw material plus the expenses of manufacturing it into marketable goods. Raw cotton could not rise beyond this margin of return on industry. At this maximum limit the consumer withdraws from the market, leaving its control to the seller or producer.

Between the maximum limit of profitable consumption and the minimum limit of profitable production there is a wide range for economies in both production and consumption, and in these economies lie the possibilities of progress in farm and in factory. The limits to the price of cotton are determined by the prevailing systems of production and consumption. Within these limits competition of buyers and sellers determines the proper price.

PART FOURTH.

SPECIAL REPORT ON SPECULATION AND PRICES OF WHEAT AND COTTON.[1]

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1. GENERAL DISCUSSION OF PRINCIPLES.

The question to be answered in this discussion is: "Does speculation tend to lower prices?" If so, are the fluctuations of such a character as to injure the interests of the farmer as against those of the dealer or speculator?

That speculation tends to lower prices permanently even the most outspoken opponents of the system of dealing in futures have not undertaken to charge. What is generally urged is that the professional short seller, by his sales of fictitious wheat or cotton, creates a fictitious oversupply in the market, which is just as instrumental in depressing prices as would be an abnormally large supply of actual wheat thrown on the market by the farmer.

Before we turn to the figures presented in this discussion let us briefly review the usual dealings in the speculative market and notice the effects of the operations of the two sides constantly working the market in opposite directions, the "bulls" and the "bears." Let us first follow the action of a "bear" who sells October wheat in July, hoping for a fall in prices, or, as some would have it, hoping to depress prices.

The immediate effect of such a future sale upon July spot prices will be practically nil, for the October wheat can not satisfy the immediate demand for spot wheat. What effect will the sale have on prices of spot wheat in October? The short seller of July appears now as a buyer in order to cover his contracts, and if his trading has any effect on the market at all it is to increase the demand, not the supply. As far, then, as he can influence spot prices, i. e., prices paid to the producer, it will be in favor of higher prices and not of lower. If the conditions of the market are such as to result in low prices, that is, to the "short seller's" advantage, then, because they are such, he must hasten to buy up the necessary amount of wheat which he originally undertook to deliver during that month; and, by so doing, he and his fellow "bears" create an increased demand which checks the prevailing tendency to lower prices.

To sum up: While the short seller may at times be in a position to depress future prices by creating a fictitious oversupply, when it comes to spot prices, i. e., the only prices which are of any practical interest to the farmer, the "bear" appears as a buyer and thereby, if at all influencing prices, must raise them.[2]

Let us look now at the bull side of the market. The "long" has bought a quantity of wheat in July to be delivered to him by the "short" in October. Again, as in the case of the "bear," the transaction will have no effect upon current spot prices. Even if we were to admit that the speculative purchases and sales for future delivery could affect current spot prices, the opposite effects of the transactions of the bull and the bear would balance each other. What will be the effect of the transaction on spot prices in October? The original "long" appears now as a seller in liquidating his purchases, and to that extent apparently increases the supply and forces down prices. But it is only apparently, for in reality he can not add one grain to the actual supply on the market. The wheat he is ready to sell has just been delivered to him by the original "short" seller, and would have just as surely been offered for sale by the farmer if there were no "short" sellers and "long" buyers in existence. It may be urged that the same quantity of wheat, which would have been sold but once by the farmer, is now offered first by the farmer to the short seller, next by the short seller to the long buyer, and finally by the latter again to somebody else, thus swelling the apparent supply and tending to lower prices. But in all such cases the fictitious supply has been met by a fictitious demand, which have all been balanced long before the month for which the contract had been concluded has arrived.

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[1] Prepared by Mr. N. I. Stone, statistician of the bureau of economic research, New York.

[2] It is true that spot prices frequently move in sympathy with future prices, and to that extent the depression of futures seems to lead to a fall in spot prices. But, as will be shown further, the two phenomena are the effects of another common cause.

Our analysis thus shows that as far as there is a speculative influence in depressing prices, it is not exercised by the much abused short, but by his opponent, the bull. A casual glance at the ordinary market reports in our financial and trade papers will reveal no end of passages like the following:

* * * "The market for wheat futures broke badly under free selling by tired 'longs,' prompted by dull and depressed foreign advices and favorable crop accounts from the Northwest. Subsequently a stronger turn to European advices, particularly from the Continent, accompanied with buying orders, fear of crop damage in the Northwest by frosts, and a small movement of the new winter wheat crop, stimulated a brisk demand from 'shorts' to cover contracts, and part of the loss was recovered." (Commercial and Financial Chronicle, 1895, July, p. 79.)

* * * "Prices advanced * * * on a brisk demand from 'shorts' to cover contracts, stimulated by reports of crop damage in the Northwest * * *. To-day the market for wheat futures opened higher, * * * but immediately weakened and declined under realizing sales by 'longs.'" (Chronicle, July 27, 1895, p. 161.)

The foregoing references to depressing effects on prices caused by realizing operations on the part of "longs" may seem to contradict what has just been stated in regard to the inability of the "bull" to depress prices by a fictitious oversupply of wheat, but it will be observed that in the first place it does not follow as a result of a deliberate attempt by the bulls to depress prices by indiscriminate selling, for that would be against their own interests, but as a result of unfavorable conditions of the market which compel the bull to "realize" in order to come out with as small a loss as possible. In the second, the "panics" and "slumps" usually referred to in the market reports relate to future prices only; they do not refer to spot prices. A realizing transaction by a 'long" carried out as a measure of self-protection in a panicky market is not a sale of spot wheat, but of a contract wheat which he was to receive in the future. Spot prices may and may not move in sympathy with the future prices, according to conditions of actual demand and supply. If the immediate demand is not great prices will usually decline, and yet need not decline to the extent they do in the "future" market. This explains why spot prices are sometimes above future prices for the same month, although, as a rule, the latter are higher than the former by the amount equal to the cost of storage of the grain in the warehouse.

In the case quoted above, viz, July 13, 1895, the spot price of No. 2 red winter wheat was 71¾ to 73½ cents, although the price of July wheat was 71⅝ cents, i. e., below the minimum price bid for spot wheat.

"But," say the opponents of "futures," "does not the selling for future delivery at a time immediately following the gathering in of new crops tend to keep prospective buyers out of the market who would otherwise have to buy their supplies at once; and is not that equivalent to a contraction of the actual immediate demand equal to the amount of the fictitious supply?" The argument seems plausible. The trouble, however, is that its authors fail to remember one important point.

The professional speculator is in the market not for the purpose of either depressing or raising prices. He is as ready to make money on a rise as on a fall in prices. In either case he will try to ascertain what the probable tendency of the market is before he embarks in any undertaking. No speculator or clique of speculators in their senses would undertake to try to depress prices in the face of a rising market. Such attempts are made at times by "bear rings" after they have already sold in anticipation of a falling market and think that by bold manipulation they may for a time create a panic in the face of an opposite tendency of the market and get out before a reaction sets in. But the repeated failures both of bull and bear cliques have not only served to teach speculators a lesson and thus to diminish the number of such ventures, but are also the best proof that the "bear" is by no means the only factor in the market.

Such being the case, the "short seller," in making his contracts—say in October, the month during which the farmer disposes of most of his produce—for future delivery a few months hence, will discount all past and future conditions that may be foreseen in fixing the price for future delivery. As a matter of fact the October price of December wheat is always higher than the October price of spot wheat; likewise the December price of May wheat is always higher than the December price of spot wheat. This may be seen from Table 6 and Charts A and D, which will be described further on.

What does this fact signify? Simply that when speculating for a fall of prices in the future, the "short" fixes in his mind the probable maximum which they will reach at the time for which the contract for delivery is made, and he contracts to deliver at a price a little above that maximum in order to make a profit. If prices should subsequently fall below that expected maximum the "short" will make a profit, the greater the difference the greater being his gain; if they should go above, he will lose; but in no case will a short seller agree to sell at a lower price than he thinks is going to rule at the time he has to cover his contract.

But the opponents of dealings in "futures" are ready with another argument. Speaking of speculations in middling cotton, the Senate Committee on Agriculture and Forestry has this to say in its report: "In fact we find * * * that uniformly sales of futures are made on every day at a lower price than the value of middling on that day." The inference implied in this statement is that because cotton futures for the current month are always below the spot prices on the day when contracts for future delivery are made, they have an effect of depressing the spot prices.

If that were the case we should look for a gradual decline in spot prices in the course of each month; but a glance at the tables of daily cotton prices will convince us that no such thing takes place, prices going up and down in the course of the month according to circumstances.

But we need not rest our conclusions on mere negative proof. Let us analyze somewhat deeper the assertion of the Senate Committee. To quote the passage in full: "We find that the very form of the contract—a sale of cotton generally to deliver any or all of about 30 grades upon what is called the basis of one grade alone as the fixer of the price—necessarily depresses the price. In fact we find, while these sales are made on the basis of middling—i. e., for a price which represents the value of middling cotton—that uniformly sales of futures are made on every day at a lower price than the value of middling on that day."[1]

Thus we see that the distinguished committee find fault first not so much with the system of "futures" itself, but with the fact that the contract for delivery is not limited to one grade only, and consider the lower prices of futures as the inevitable consequence of that condition. And yet in the case of wheat contracts a similar rule is observed without leading to any such results. On the contrary, prices of wheat futures are as a rule somewhat above spots by the amount equal to the cost of storage, insurance, etc. How is the difference to be accounted for? It is due to an important difference in the provisions for the deliveries of the respective products. In the case of wheat, if the seller is unable to deliver at the required time the contract grade of wheat, he has the option to deliver any higher grade, and the buyer is compelled to accept it after paying the seller the market difference between the values of the grade received and that contracted for. In the case of cotton the rule is reversed, and the seller may deliver almost any grade poorer than the contract grade—middling cotton—the buyer being compelled to accept it after deducting from the price the market difference between the values of the grade delivered and middling. This creates an anomalous situation, and is considered a great evil by many people in the trade. A manufacturer or broker who knows he will need in the future a certain quantity of middling cotton buys it for future delivery, and yet is not sure that after the contract has been carried out by the other party he will get what he wants. The chances are that he will get a grade that he can not use, and to insure himself against possible loss he pays a lower price than what he would be willing to pay for middling cotton.

The uniformly lower price of future cotton as against spot is, therefore, not due to the fact that "one grade alone" is used "as the fixer of the price," but to the fact that, unlike in the case of wheat, poorer grades than that contracted for may be forced upon the purchaser, who is thus obliged to discount the price as a means of insurance against possible loss.

But, that being the case, is not the power for evil on the part of future sales as a competitor of spot sales considerably cut down? If intending purchasers of cotton can not rely as well on their future contracts as do the purchasers of wheat, does not that tend to raise the value of spot cotton, the only one dealt in by the producer, as compared with future cotton? Of course it does, as the testimony of the committee just quoted duly bears witness.

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[1] Report of the Senate Committee on Agriculture and Forestry, Fifty-third Congress, third session, Vol. I, p. XIII and XIV.

In analyzing the dealings of "bears" and "bulls" we assumed that they speculate on "futures" for many months ahead. Would the conclusions we arrived at hold for futures maturing in the month during which the contract is made? If, as the opponents of futures maintain, the "shorts" could depress prices at pleasure by continual offers, and make their profits by buying subsequently the wheat contracted for at lower prices, the question of easy acquisition of wealth would forever be solved, and failures through speculation would become a thing of the past. All that a man of moderate means would have to do to get rich would be to sell wheat, through some broker, for delivery during the current month, buy an equal quantity at a reduced price at the end of the month, and count up his profits. The trouble with the scheme, however, is that in order to sell there must be a buyer, and the buyer speculator is as much after profits as the seller. It then becomes a question as to which of the two sides has the longer purse and, above all, the conditions of the market in its favor.

A glance at a table of daily quotations of "future" prices, either of wheat or cotton, will convince anyone that "futures," and "spots" as well, just as frequently go up in the course of the month as they go down.

This leads to the conclusion that so far from being the cause of low prices short selling is rather a consequence, in the sense that it is indulged in only when it is thought that the natural tendency of the market is such as to favor a trend of low prices.

2. PRICES AFTER HARVEST COMPARED WITH OTHER MONTHS.

According to the law of supply and demand, prices of wheat and cotton should be lowest immediately after harvest time, when the supply of these products is the highest during the year. If speculation has any effect upon the prices of these commodities, it should reveal itself in the form of some kind of a modification of that law. If the charges of those who are opposed to "future" dealings are justified—if the effect of speculation is to depress prices to the producer—then we should find prices under a speculative system to be much lower at the time succeeding the harvest, as compared with prices at other seasons of the year, than under a nonspeculative system.[1]

The following tables have been prepared to test the justice of the charge.

Table 1 gives the average monthly price of spot wheat at Chicago for the last 15 years:

TABLE 1.—*Price of No. 2 spring wheat in Chicago.*

[Compiled by the Bureau of Economic Research, New York.]

Year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	Cents.	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*
1885	......	......	......	......	......	......	87.88	83.50	81.50	87.88	87.19	86.31
1886	80.88	79.88	78.38	76.44	75.75	74.25	76.12	76.88	74.62	72.19	74.75	77.44
1887	78.69	75.31	76.00	80.19	84.81	79.69	69.66	68.12	69.50	70.75	74.12	77.25
1888	77.00	75.50	74.00	76.38	85.19	82.38	82.31	87.75	77.50	110.19	108.75	101.75
1889	97.06	100.75	100.56	89.06	81.88	78.75	80.88	77.12	79.19	80.06	79.94	78.38
1890	76.31	75.38	78.38	83.75	94.88	88.62	89.50	98.43	100.12	99.81	94.56	90.44
1891	91.62	95.31	98.88	107.38	103.88	96.75	89.67	100.12	95.38	95.75	94.00	91.44
1892	87.50	87.94	83.44	81.19	82.88	82.88	78.00	77.06	73.12	72.00	71.38	71.00
1893	75.12	73.94	76.00	79.25	72.25	65.06	60.32	59.62	66.19	63.38	60.88	61.81
1894	61.12	57.50	57.56	60.62	56.12	57.00	54.38	53.94	52.75	51.39	53.69	51.88
1895	51.94	50.75	53.62	58.69	71.06	75.00	66.44	63.88	58.69	59.56	57.00	56.75
1896	61.31	66.62	65.44	66.12	62.38	60.31	58.25	58.06	62.50	73.38	82.69	83.88
1897	77.00	74.50	73.50	71.50	72.38	70.00	73.50	88.00	92.50	90.00	94.25	96.00
1898	99.56	101.50	103.38	112.25	151.00	97.50	76.88	70.25	65.38	66.12	67.00	66.38
1899	71.25	72.12	70.25	73.06	73.94	75.25	72.00	71.75	72.25	71.56	65.69	63.75
1900	62.70	65.34	63.88	63.96	62.25	76.90	......	......	......	......	......	......
Average of 15 years	76.60	77.49	76.88	78.66	82.04	77.36	74.39	75.63	74.75	77.60	77.73	77.16
Average of 14 years	74.96	75.77	74.99	76.27	77.12	75.89	71.45	74.75	73.48	76.72	76.55	75.82

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[1] By a nonspeculative system is meant here one where there is no selling of "futures." For speculation, in the larger sense of buying and selling for profit, has been in existence for centuries

Table 2 gives average prices of wheat on the first day of each month, at New York, for a period of 20 years before the advent of speculation.

TABLE 2.—*Average prices of wheat in New York on first day of each month.*

[Compiled by the author from the Report of the Secretary of the Treasury for 1863.]

Year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	Cents.	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*
1840	106.0	120.0	107.5	110.0	104.0	101.0	96.5	106.0	112.0	100.5	102.0	100.5
1841	103.5	101.0	102.5	95.0	97.5	107.5	137.5	127.5	140.0	142.5	132.5	132.5
1842	125.0	125.0	127.5	125.5	122.5	129.5	127.5	112.5	102.0	92.5	85.0	94.5
1843	80.5	87.5	84.5	92.5	102.5	105.0	119.0	102.5	101.0	94.5	97.5	102.5
1844	100.0	102.5	105.5	104.0	109.0	96.5	90.0	91.5	87.5	87.0	100.0	97.5
1845	102.5	97.5	100.0	102.5	102.5	105.0	100.0	95.0	95.0	92.5	122.5	135.5
1846	131.0	125.0	120.0	121.5	107.5	98.5	98.5	92.5	82.5	110.0	107.5	107.5
1847	102.5	152.5	158.5	142.5	150.0	192.5	146.0	110.0	115.0	110.0	131.0	126.0
1848	125.0	127.5	130.0	138.5	127.5	116.0	103.5	90.0	......	112.5	108.5	105.0
1849	122.5	127.5	134.5	122.5	124.5	123.5	127.5	122.5	126.5	121.0	120.5	122.0
1850	125.0	127.5	128.0	129.0	133.5	150.0	149.0	......	113.5	116.0	113.5	118.0
1851	120.0	120.0	115.0	112.5	114.0	108.0	108.5	103.0	100.0	100.5	94.5	99.0
1852	109.0	112.5	114.0	110.0	109.5	112.0	112.5	108.5	112.5	108.5	111.5	111.5
1853	132.0	132.5	128.0	123.0	131.5	129.0	129.0	134.5	140.5	154.0	164.5	177.5
1854	204.0	242.5	197.5	199.0	225.0	245.0	230.0	237.5	217.5	176.5	212.5	237.5
1855	257.5	250.0	260.0	270.0	277.5	280.0	......	......	200.5	204.0	221.0	220.0
1856	214.5	212.5	201.5	195.0	177.5	144.0	155.0	152.5	152.5	165.0	169.0	170.5
1857	175.0	175.0	175.0	162.5	......	187.5	192.5	182.5	168.5	130.0	147.5	147.5
1858	137.5	137.5	140.0	137.5	132.5	122.5	122.5	122.5	125.0	142.5	135.0	140.0
1859	140.0	145.0	152.5	147.5	......	......	......	......	140.0	135.0	145.0	145.0
Average	136.5	141.5	139.1	137.25	136.0	139.6	130.3	123.0	128.0	124.7	132.5	131.5

Although these are not monthly averages, they may nevertheless be used for our purpose, since the figures are obtained on a uniform plan for the whole of the period of 20 years; besides, the monthly averages for the whole period are formed by averaging the prices of each month for the whole of the 20 years, which is a sufficiently long period to furnish an accurate basis for comparison of monthly fluctuations of prices.

According to Professor Bemis[1] 64 per cent of the total wheat crop is received at Chicago in the course of the 4 months from August to November. Since the August receipts are largely composed of old grain, it is safe to assume that most of the wheat that is received in Chicago in the course of these months, as well as that which reaches the city in December, is bought up in the country during the months of September, October, and November. The average for each month on the basis of 15 years, 1885-1899 (see Table 1), shows May to be the month of highest prices, viz, 82.04 cents per bushel, the prices for the other months, in their order, being as follows:

1. May	82.04	7. December	77.16
2. April	78.66	8. March	76.88
3. November	77.73	9. January	76.60
4. October	77.60	10. August	75.63
5. February	77.49	11. September	74.75
6. June	77.36	12. July	74.39

Since, however, the year 1897-98 was one of exceptionally high prices of wheat, it is probably more proper to rule it out, the average prices on the basis of 14 years being then as follows:

1. May	77.12	7. February	75.77
2. October	76.72	8. March	74.99
3. November	76.55	9. January	74,96
4. April	76.27	10. August	74.75
5. June	75.89	11. July	74.45
6. December	75.82	12. September	73.48

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[1] "The discontent of the farmer," Journal of Political Economy, v. 1, p. 203.

The results are practically the same. In both cases the price in May appears to be the highest, which is perfectly natural considering that the owners of the wheat have had to pay storage charges, interest, insurance, etc., for some 8 or 10 months, and must get that out of the price. The month of April is the nearest to May in point of conditions just mentioned. The price during that month is therefore second to May, although if the prices of the year of the Leiter wheat corner be excluded, the April price falls below those in October and November.

The months of October and November, on one hand, and August and September on the other, should be considered in pairs.

In the former two months (according to Professor Bemis's figures) nearly 30 per cent of the total annual wheat receipts reach Chicago, and during the latter two months about 35 per cent. Since, according to the same authority, "most of the August receipts are of old grain or winter wheat," the month of August is probably of lesser importance, but that still leaves September the most important month of the year, with over 18 per cent of the total receipts. What do the averages of those months show us? While August and September are among the months of lowest prices, October and November record a higher price than any other month except May. Since the available wheat supply in October and November is certainly not below that in September, the only explanation I venture to suggest is that the wheat disposed of in August and September comes from farmers who are more pressed for cash, and are, therefore, taken advantage of by the traders, whereas those who can hold their wheat longer are able to take advantage of all the favorable conditions of the market and command a higher price.

But whatever the true explanation of that phenomenon may be, the crucial question is whether that is due to speculation. It is, therefore, interesting to see whether the farmer fares now better or worse than he did when modern speculation was unknown. The averages of Table 2 give us an answer to that question, the order of monthly prices according to that table being as follows:

1. February	141.5	7. December	134.5
2. June	139.6	8. November	132.5
3. March	139.1	9. July	130.3
4. April	137.25	10. September	128
5. January	136.5	11. October	124.7
6. May	136	12. August	123

Instead of occupying the second place, as under the speculative system, the months of October and November occupy the eleventh and eighth, respectively. September and August fare not much better, being the tenth and twelfth, respectively. In other words, whether the farmer in the forties and fifties disposed of his wheat at once or held it till November, it did not make much difference to him; in all those months the lowest prices of the year prevailed. Again, the average price for the three months, September, October, and November, for the speculative period of 14 years (1885-1899) is 75.58 cents; the annual average for the same period is 75.57 cents, i. e., the price which the farmer gets is about the same as the average price throughout the year, although the dealers have to earn their storage, insurance, and other charges.[1]

The average price for the same three months for the twenty years (1840-1859) of the nonspeculative period is $1.284, the annual average $1.3358—that is, under the nonspeculative system the farmer received a lower price than the average price prevailing during the rest of the year. That again does not look as though the farmer has been hurt by speculation. On the contrary, with the wide dissemination of knowledge of the condition of crops at home and abroad and of prices ruling in the principal markets of the world, which is the direct result of organized speculation, the farmer has evidently been more able to take advantage of favorable conditions than he was before.

There is another aspect to the figures of the two tables. The highest and lowest monthly averages for the nonspeculative period of 1840-1859 are 141.5 and 123, respectively, making a difference of 15 per cent.

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[1] This serves to bear out the following statement in Dr. Emery's able and exceedingly valuable book on "Speculation on the stock and produce exchanges of the United States:" "It is not uncommonly stated that in the last few years futures in the wheat market have not, in the long run, stood enough above spots to cover all the expenses of carrying. Some suggested reasons for this are: Cut charges for storage; the failure of outside speculation to maintain the market against hedging sales; the fact that the great elevators will buy wheat and carry it for what they can get, and perform the functions of both carrier and trader for the commission of one. In any case, the tendency is to bring all prices together." (Footnote, p. 131.)

On the same basis the difference for the speculative period of 14 years, 1885–1899, is less than 5 per cent. If the year of extreme fluctuations in the latter period be included, making an average for 15 years, the difference between the highest and lowest monthly average rises to 10 per cent. That is, under speculation, while fluctuations of prices are more frequent, they do not reach so wide extremes as they used to. That is another beneficent result of the wider dissemination of knowledge of conditions brought about by speculation as well as other influences working in that direction, but which we can not discuss here.

The following from Mr. Emery's book on speculation, bearing upon the question of fluctuations of prices of wheat, will be of interest in this connection.

"The following table is a comparison of average monthly prices of winter wheat in New York[1] for 4 years before and 4 years after the advent of speculation:

Month.	1855–56.	1856–57.	1857–58.	1858–59.	Month.	1890.	1891.	1892.	1893.
July	$2.07½	$1.55	$1.75	$1.04	January	$0.86⅛	$1.05¾	$1.02⅜	$0.79⅛
August	1.80	1.57	1.55	1.15¼	February	.85¼	1.10 11/16	1.04⅜	.79 3/16
September	1.85	1.55	1.40	1.18	March	.87¾	1.13⅜	1.01	.75⅞
October	1.93	1.56	1.17	1.11½	April	.93 3/16	1.19 5/16	.98⅛	.76⅝
November	2.08	1.55	1.19	1.18	May	.98¾	1.13⅞	.96⅛	.77⅞
December	2.05	1.57	1.17	1.18¼	June	.94⅛	1.07 13/16	.91 13/16	.72 1/16
January	1.95	1.57	1.12	1.25½	July	.93 3/16	.99⅞	.86 3/16	.71 1/16
February	1.83	1.55	1.17	1.36½	August	1.01	1.05⅞	.82⅛	.68
March	1.70	1.48	1.15	1.48	September	1.01 13/16	1.03 5/16	.78¾	.72⅛
April	1.64	1.45	1.17	1.43¾	October	1.06⅛	1.04¼	.77 13/16	.69⅛
May	1.60	1.65	1.04	1.65	November	1.02¾	1.05 13/16	.75⅞	.66⅝
June	1.45	1.70	1.02	1.55¼	December	1.04 1/16	1.05 7/16	.76⅛	.67⅛

"An examination of these tables shows the marked differences in the amount of annual fluctuations in earlier years, but reveals in the main a smaller amount of fluctuations in the second period. For 8 months in 1856–57, a very unusual year, the average monthly price varied only from $1.55 to $1.57, and then from April to June changed from $1.45 to $1.70. The range in average monthly prices for each year, measured in per cent of the highest price, was:

	Per cent.		Per cent.
1855–56	30	1890	19.6
1856–57	14.7	1891	16.3
1857–58	41.7	1892	27.4
1858–59	37	1893	15.7

"The widest margins between any two successive months were:

	Per cent.		Per cent.
1855–56 (July–August)	B. 2	1890 (July–August)	10.4
1856–57 (April–May)	12.1	1891 (June–July)	7.36
1857–58 (September–October)	16.4	1892 (June–July)	6.13
1858–59 (April–May)	12.9	1893 (May–June)	6.86

"The foregoing figures of price variations can not, however, be accepted as an entirely accurate indication of the influence of speculation. In the first place they are summarized in the rough form of averages, and do not pretend to be more than fragmentary. Incomplete as they are in this respect, however, they do show a pretty uniform tendency toward a lessening of price fluctuations. In the second place, it is impossible to attribute a change of this nature unmistakably to speculation. The course of the price movements of to-day is a joint result of a joint development. The increased facilities of transportation and communication, the improvements in trade methods, and the speculative system have all developed together. The result of all these forces working in concert is toward smaller variations in prices, but how much of the result can be attributed to any one cause it is perhaps fruitless to discuss."

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[1] For the earlier period figures are taken from the reports of the New York Chamber of Commerce, 1857–1859, and for the later period from the annual reports of the Produce Exchange.

Let us see whether the conclusions we have arrived at as regards wheat will hold for cotton.

Table 3 gives the receipts of cotton in all the important cotton ports in the United States, and has been compiled for the purpose of ascertaining the months in which the greater portion of cotton is disposed of by the producers.

Table 4 gives the average monthly prices of cotton in New York for the past 20 years.

Table 5. Average prices of cotton on the first day of each month for 20 years, before the advent of speculation.

TABLE 3.—*Receipts of cotton in all the cotton ports in the United States by months.*

[Calculated and compiled from data given in the Commercial and Financial Chronicle, New York.]

[Quantity, in thousands of bales.]

Month.	1898-99.	1897-98.	1896-97.	1895-96.	1894-95.	1893-94.	Total.	Per cent.
September	698	823	1,004	519	729	566	4,339	10.1
October	1,572	1,332	1,387	1,102	1,535	1,244	8,172	19.0
November	2,139	1,988	1,430	1,067	1,836	1,495	9,955	23.1
December	1,391	1,430	1,131	857	1,288	1,043	7,140	16.6
January	1,054	1,238	690	604	985	666	5,237	12.2
February	406	708	393	396	483	293	2,679	6.2
March	392	484	276	278	488	161	2,079	4.8
April	275	269	177	192	301	252	1,466	3.4
May	260	202	148	131	156	120	1,017	2.3
June	127	88	25	44	41	51	382	0.9
July	68	37	15	21	21	25	187	0.4
August	68	49	70	127	14	63	391	0.9
Total	8,450	8,648	6,746	5,338	7,880	5,982	43,014	100

TABLE 4.—*Average monthly prices of middling cotton in New York.*

[Compiled by the Bureau of Economic Research.]

Year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1880	......	......	......	......	......	......	11.69	11.78	11.78	11.47	11.47	11.94
1881	18.84	11.62	11.16	10.75	10.72	10.97	11.50	12.50	11.62	11.81	11.81	12.00
1882	11.91	11.78	11.94	12.15	12.22	12.19	12.62	12.94	12.31	11.19	10.53	10.14
1883	10.19	10.22	10.31	10.22	10.31	10.50	10.22	10.12	10.31	11.03	10.50	10.47
1884	10.62	10.72	11.06	11.69	11.69	11.09	11.03	10.91	10.59	10.06	10.09	10.59
1885	11.12	11.31	11.31	10.91	10.81	10.66	10.25	10.38	10.16	9.78	9.41	9.31
1886	9.25	9.00	9.06	9.22	9.25	9.22	9.47	9.41	9.28	9.38	9.09	9.38
1887	9.47	9.50	9.97	10.59	11.00	11.09	10.53	9.85	9.91	9.56	10.03	10.53
1888	10.53	10.62	10.19	9.78	9.97	10.16	10.59	10.97	10.56	10.03	9.69	9.78
1889	9.81	10.00	10.19	10.69	11.09	11.06	11.12	10.91	11.31	10.78	10.41	10.28
1890	10.62	11.44	11.38	11.69	12.69	12.19	12.19	11.72	10.68	10.25	9.59	9.38
1891	9.25	9.12	8.97	8.94	8.91	8.59	8.19	8.22	8.56	8.56	8.19	7.93
1892	7.57	7.25	6.93	7.03	7.31	7.62	7.38	7.28	7.34	8.00	9.09	9.69
1893	9.72	9.25	9.09	8.35	7.72	7.88	8.03	7.66	7.97	8.28	8.16	7.94
1894	8.09	7.84	7.62	7.59	7.25	7.34	7.16	6.94	6.62	6.06	5.78	5.84
1895	5.72	5.62	6.00	6.34	7.06	7.19	7.06	7.59	8.50	8.94	8.72	8.41
1896	8.28	7.94	7.81	7.97	8.28	7.72	7.25	7.78	8.62	8.19	7.91	7.41
1897	7.22	7.22	7.31	7.38	7.69	7.78	7.88	7.97	7.22	6.29	5.89	5.89
1898	5.91	6.17	6.17	6.28	6.44	6.48	6.15	5.14	5.79	5.38	5.36	5.80
1899	6.11	6.47	6.40	6.19	6.23	6.21	6.15	6.26	6.51	7.34	7.62	7.69
1900	7.78	8.69	9.69	9.79	9.88	9.06	......	......	......	......	......	......
Average.	9.05	9.09	9.13	9.18	9.33	9.25	9.30	9.33	8.78	9.12	8.97	9.03

TABLE 5.—*Average prices of cotton in New York on first day of each month.*

[Compiled by the author from the Report of the Secretary of the Treasury for 1863.]

Years.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1840	......	9.0	8.5	8.0	8.0	9.0	9.0	9.0	9.5	......	......	......
1841	9.5	11.0	10.0	10.0	10.5	10.0	10.0	10.0	10.0	9.5	9.5	9.0
1842	8.5	8.0	8.5	8.0	8.0	8.0	8.5	8.0	8.0	8.0	8.0	7.0
1843	7.0	6.0	6.0	6.0	7.0	7.0	7.0	5.5	6.0	7.5	7.0	7.5
1844	8.0	9.0	8.0	7.0	7.0	6.5	6.5	6.5	5.5	5.0	5.5	5.0
1845	5.0	6.0	5.5	5.5	5.5	5.5	6.5	7.0	7.5	7.0	7.0	6.5
1846	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	8.0	8.5	9.0	8.5
1847	10.0	12.0	10.0	10.5	11.5	11.0	10.5	11.0	11.0	11.0	8.0	7.0
1848	7.5	7.5	7.0	6.0	5.0	6.0	6.0	6.0	6.0	6.0	5.5	5.5
1849	6.0	6.5	6.5	7.0	6.5	7.0	7.5	9.0	9.5	10.0	10.5	10.0
1850	11.0	12.5	12.0	11.5	11.5	12.0	12.5	12.5	12.5	13.5	14.0	13.0
1851	13.5	13.5	10.5	11.5	11.0	9.5	9.5	8.5	9.5	9.5	8.5	8.5
1852	8.0	8.0	8.0	8.0	9.0	10.0	10.0	10.0	11.0	10.5	10.0	10.0
1853	9.5	10.5	10.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	10.0	11.0
1854	10.0	9.5	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	8.0
1855	7.0	8.0	8.0	9.0	9.0	11.0	11.0	10.0	11.0	9.0	9.0	9.0
1856	9.0	9.0	10.0	10.0	11.0	10.0	11.0	11.0	11.0	12.0	12.0	12.0
1857	13.0	13.0	14.0	14.0	14.0	14.0	14.0	15.0	15.0	15.0	......	......
1858	9.0	10.0	12.0	11.0	12.0	11.0	12.0	12.0	12.0	13.0	12.0	12.0
1859	11.0	12.0	12.0	11.5	11.5	11.0	11.0	12.0	11.0	11.0	11.0	11.0
Average.	8.9	9.4	9.1	9.1	9.2	9.3	9.5	9.5	9.7	9.8	9.2	8.9

According to Table 3, nearly 60 per cent of all the cotton crop is disposed of in the course of the 3 months of October, November, and December. Under the speculative system (Table 4) these 3 months occupy the fifth, first, and fourth places, respectively, in the descending order of monthly averages. Under the nonspeculative system (Table 5) their corresponding places are first, seventh, and eleventh. The average of the 3 months under the speculative system is 9.35 cents as against 9.17, the annual average, making a difference of 2 per cent in favor of the 3 months. Under the nonspeculative system the average for the 3 months is 9.3, the same being also the annual average. In other words, while the difference to the cotton producer under the two systems is not appreciably great, at any rate he fares not worse, if not much better, under the speculative than he did under the nonspeculative system.

So far as the annual range of fluctuations is concerned, it is again smaller in the speculative period than in the nonspeculative, it ranging from 9.17 to 9.35, or 6¼ per cent, in the former and 8.9 to 9.8, or 10 per cent, in the latter. In both cases the per cent of fluctuations is from the lower price. Thus all that has been said in regard to wheat is also true of the cotton market.

Following are Dr. Emery's conclusions in regard to fluctuations of cotton prices:

"Speculation in cotton began about 1870. Following are the highest and lowest prices of cotton per pound in New York for the decades 1821-1830, 1851-1860, and 1885-1894, with the percentage of fluctuation from the highest price. The grade quoted is the same throughout each decade, and a change of grade between the decades does not affect the comparison of fluctuation:

Year.	Low.	High.	Per cent.	Year.	Low.	High.	Per cent.	Year.	Low.	High.	Per cent.
	Cents.	*Cents.*			*Cents.*	*Cents.*			*Cents.*	*Cents.*	
1821	11	20	45	1851	8¾	15	41.7	1885	$9\frac{7}{16}$	$10\frac{7}{16}$	9.3
1822	10	18	41.4	1852	8⅞	11⅞	25.3	1886	9⅛	10	8.8
1823	9	17	47	1853	9¾	11¾	17	1887	9⅛	11⅜	19.8
1824	11½	18	36.1	1854	10	11¾	14.9	1888	9½	11	13.6
1825	12	30	60	1855	8½	13	34.6	1889	$9\frac{11}{16}$	11½	15.7
1826	9	17½	48.6	1856	9	11⅝	22.6	1890	10¼	12⅝	18.8
1827	8¾	11½	23.9	1857	11⅝	15¾	26.1	1891	$7\frac{15}{16}$	10⅝	25.3
1828	8¼	13	36.5	1858	8⅞	15¾	43.6	1892	$6\frac{3}{16}$	8¾	29.3
1829	8	11½	30.4	1859	11	13⅜	17.7	1893	$7\frac{3}{16}$	10	28.1
1830	8	12½	36	1860	10½	11¾	10.6	1894	6⅞	$8\frac{9}{16}$	19.6

"The above figures show constantly diminishing fluctuations. The average per cent of fluctuation for the three periods is, for 1821-1830, 40.79 per cent; for 1851-1860, 25.41 per cent; for 1885-1894, 18.83 per cent. The extreme fluctuations for any one year in the three decades were respectively 48.6 per cent, 43.6 per cent, and 29.3 per cent. The average annual fluctuation was lessened more between the first and second periods taken (37.7 per cent) than between the second and third (25.9 per cent)—that is, while the speculative period (1885-1894) shows narrower fluctuations than the period 1851-1860, there was even greater improvement between this period and the decade 1821-1830."

3. SPOT AND FUTURE PRICES.

In discussing the conclusions of the Senate Committee on Agriculture and Forestry we have shown the inadequacy of comparing spot prices with futures for the same month in the case of cotton. We shall now make an attempt to give a somewhat more detailed comparison of spot and future prices for the two commodities, wheat and cotton.

The comparison may be made in two ways; we may take, e. g., the July prices of October wheat and compare them first, with spot July prices; and secondly, with spot October prices. The former will show to what extent the anticipation of a new crop deflects the speculative ("future") price from the current ("spot") one; the latter will show whether the speculative price a few months in advance of the harvest affects the final price which is paid the farmer for his produce, and if so what the nature of that influence is.

In order to make the comparison on the basis of several years, the following tables and charts have been prepared. Tables 6, 7, and 8 (pp. 198-99) contain the average monthly prices, spot and future, of wheat in Chicago, Liverpool, and St. Louis, respectively. The averages were obtained on the basis of Saturday prices, except where the latter were not available, when the nearest preceding price available was taken:

TABLE 6.—*Monthly average prices of wheat in Chicago for fifteen years.*

[Compiled from the reports of the Chicago Board of Trade.]

Year.	May.		July.		October.		December.	
	(1) Spot.	(2) July future.	(3) Spot.	(4) October future.	(5) Spot.	(6) December future.	(7) Spot.	(8) May future.
1883	....	....	....	....	92.49	95.17	96.92	105.07
1884	89.60	92.41	82.42	85.75	75.90	78.38	71.73	85.88
1885	89.15	92.48	87.55	93.22	87.04	89.52	85.72	92.35
1886	76.67	78.91	76.57	80.72	72.46	75.60	77.60	85.68
1887	86.09	85.72	69.78	74.10	70.63	73.10	77.32	84.84
1888	85.65	87.17	82.60	81.68	116.65	117.03	102.81	108.78
				September future.	September			
1889	82.42	77.79	80.14	77.48	78.26	81.99	77.91	82.80
1890	94.92	94.24	88.46	90.41	99.20	102.81	90.18	99.07
1891	104.15	101.24	89.48	86.29	95.20	97.56	91.23	97.45
1892	83.55	82.76	78.07	77.47	72.98	74.83	71.56	77.96
1893	72.03	75.39	62.88	67.51	66.61	65.60	61.91	67.74
1894	56.25	57.63	53.84	55.73	52.66	52.84	54.29	58.81
1895	68.17	69.09	67.68	69.48	58.62	60.54	56.02	59.31
1896	61.47	62.23	55.90	57.07	60.00	70.97	77.81	81.02
1897	72.31	71.23	74.75	70.72	93.83	92.96	88.62	91.84
1898	155.47	105.84	76.97	67.01	66.06	....	....	....

TABLE 7.—*Prices of wheat in Liverpool.*

[Furnished by Mr. C. F. Bond, New York representative of Brownhall's Corn Trade News.]

Year.	October.		December.		May.
	(5.) Spot.	(6.) December future.	(7.) Spot.	(8.) May future.	(9.) Spot.
1885-86	107.70	107.70	106.80	105.72	108.30
1886-87	100.20	99.53	108.72	110.64	106.50
1887-88	93.30	92.02	100.80	102.60	101.52
1888-89	121.92	121.20	117.60	114.83	105.84
1889-90	103.20	103.80	102.00	102.37	104.76
1890-91	108.15	108.37	108.90	109.22	123.00
1891-92	118.92	121.20	120.72	123.45	100.65
1892-93	89.76	88.80	86.10	87.30	85.05
1893-94	78.45	79.35	78.72	80.16	74.10
1894-95	64.20	62.70	71.64	71.28	81.96
1895-96	76.05	76.65	76.80	77.77	76.26
1896-97	91.80	93.15	99.52	97.87	90.54
1897-98	112.98	107.39	111.45	105.41	155.47
1898-99	90.20	83.91	87.54	82.38	89.80
1899-1900	88.87	87.06	85.98	84.38	83.73

TABLE 8.—*Prices of wheat in St. Louis.*

[Compiled from the reports of the St. Louis Merchants' Exchange.]

Year.	May.		July.		September.
	Spot.	July future.	Spot.	September future.	Spot.
1894	52.17	53.82	51.46	51.39	49.72
1895	74.19	68.45	67.31	68.12	60.56
1896	65.16	59.38	54.41	55.73	56.75
1897	93.40	75.62	73.16	72.78	96.53
1898	122.62	96.02	75.31	65.86	67.06
1899	77.06	73.56	73.05	73.70	69.62

The charts have been drawn to represent graphically the results of the comparisons referred to above. Let us take up first two charts illustrating the price movements of wheat in Chicago, namely, those before and after the harvest.

Chart A shows the spot prices in December, the December prices for May delivery, and the May spot prices, and is based on the data of Table 6.

Chart B shows the spot prices in July, the July prices for October (or September[1]) delivery, and the October (or September) spot prices, based on data of the same table.

Chart C shows the course of May prices of spot wheat, May prices for July delivery, and July spot. It corresponds to Chart A, since both represent a period preceding harvest, Chart A for spring wheat, and C for winter.

Chart E shows the same prices for St. Louis that Chart C does for Chicago.

Similarly Chart F shows for St. Louis what Chart B does for Chicago.

Looking at Chart A, we notice what we have mentioned before, that, without a single exception, the December price for May wheat always stands above the prices for spot wheat during December. It shows that the "future" or speculative price is merely an anticipation of spot prices which will prevail at the time when contracts for delivery shall mature. As the stock of wheat in May must always be lower than in December, and the cost of storing the wheat must be added to the total value, prices during the former month must naturally be higher than in the latter, a fact which the speculator takes into account when making his contracts for May delivery.

How well he anticipates these future conditions may be seen from the same diagram. Out of the 15 years represented on the diagram there were only 5 years

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[1] Previous to 1889 the reports of the Chicago Board of Trade from which the prices have been compiled gave prices of October wheat in July; since that year, however, the October prices are not given and September prices had to be substituted.

CHART A.—Showing course of December and May spot and future prices of wheat at Chicago for fifteen years. Table 6, p. 198.

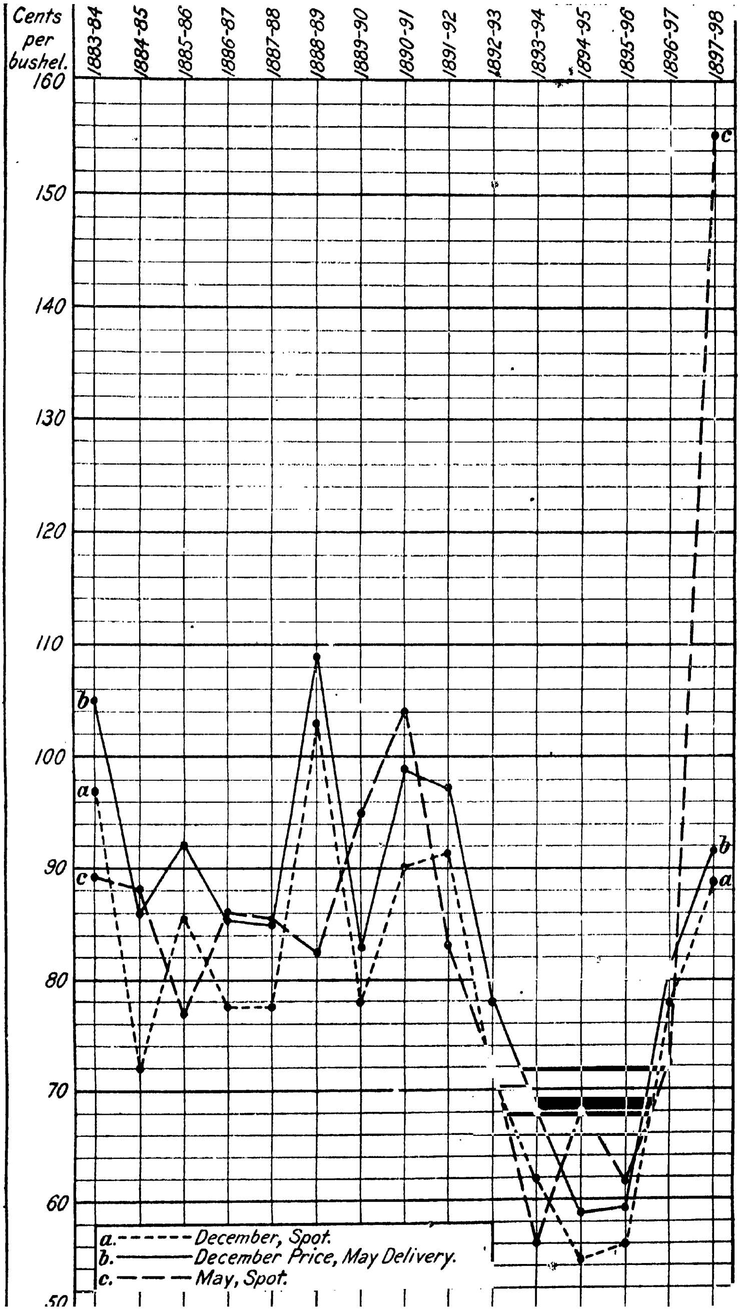


CHART B.—Showing course of spot and future prices of spring wheat at Chicago for fifteen years.

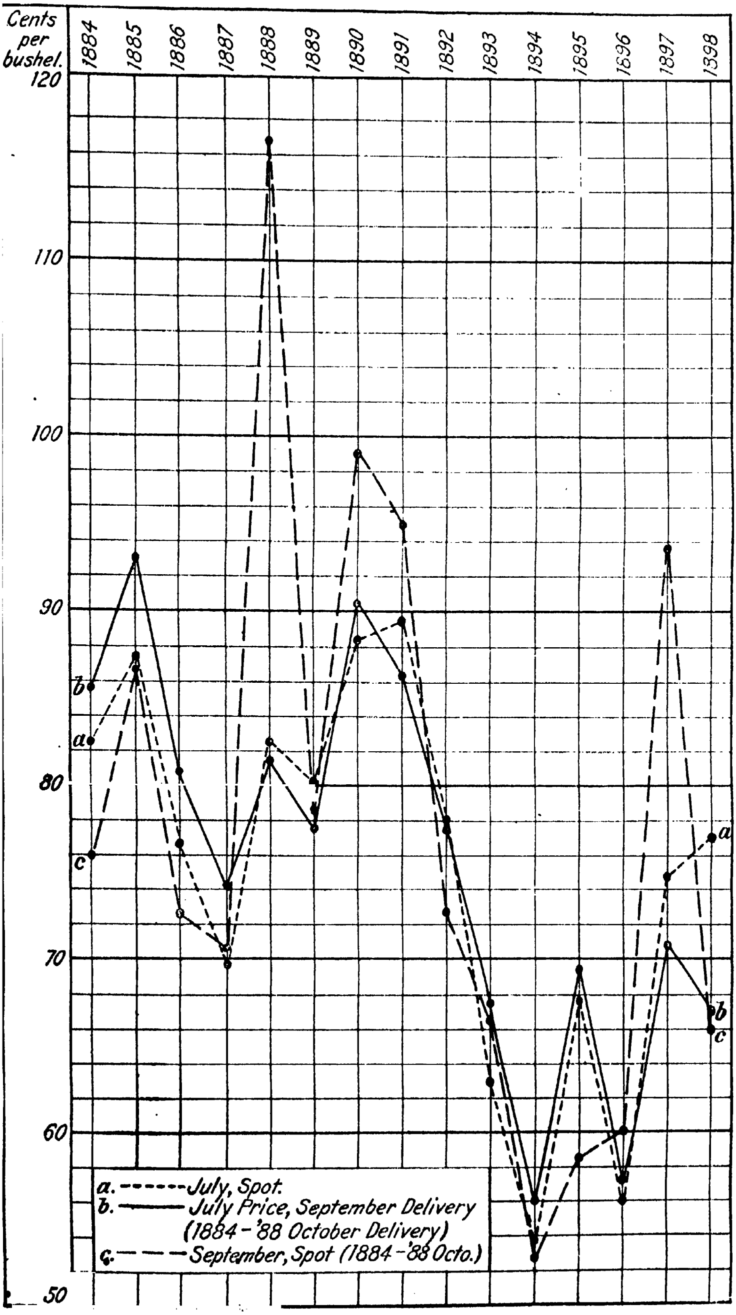
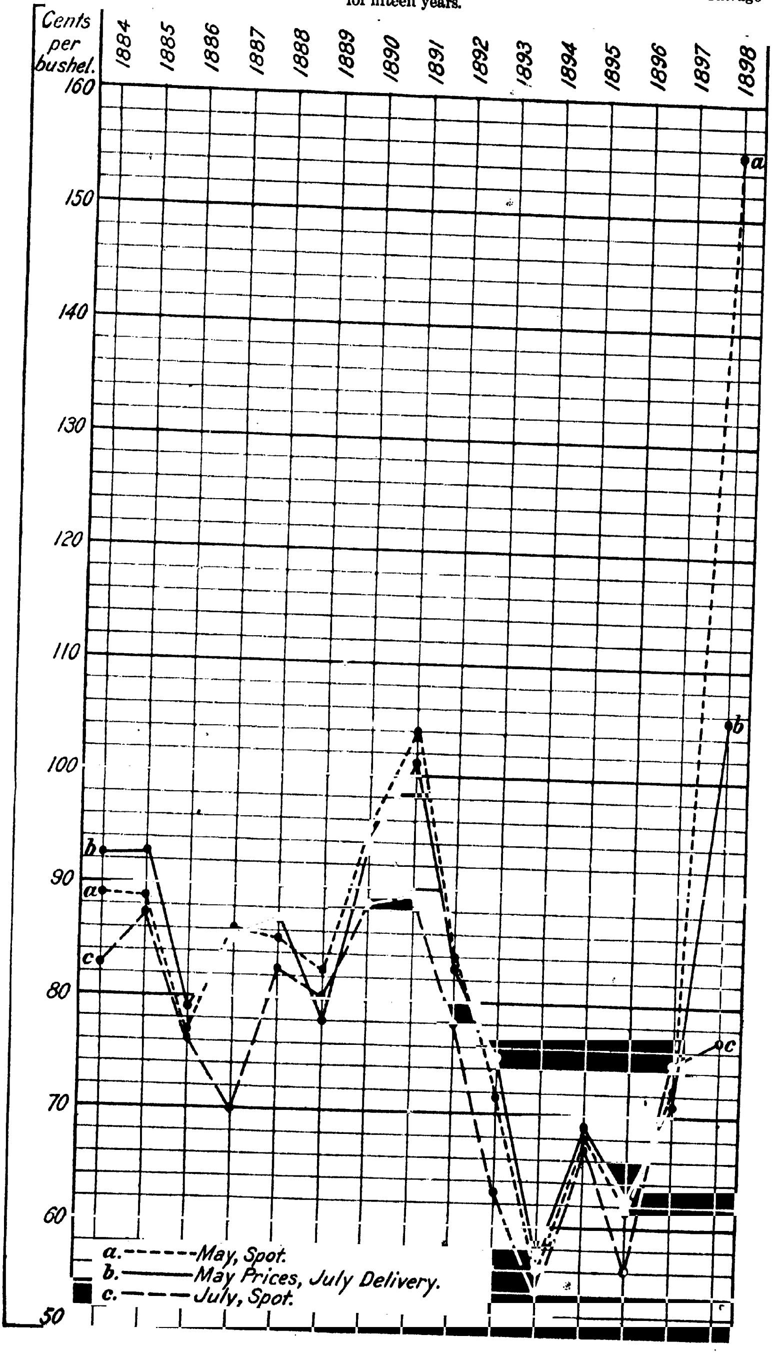
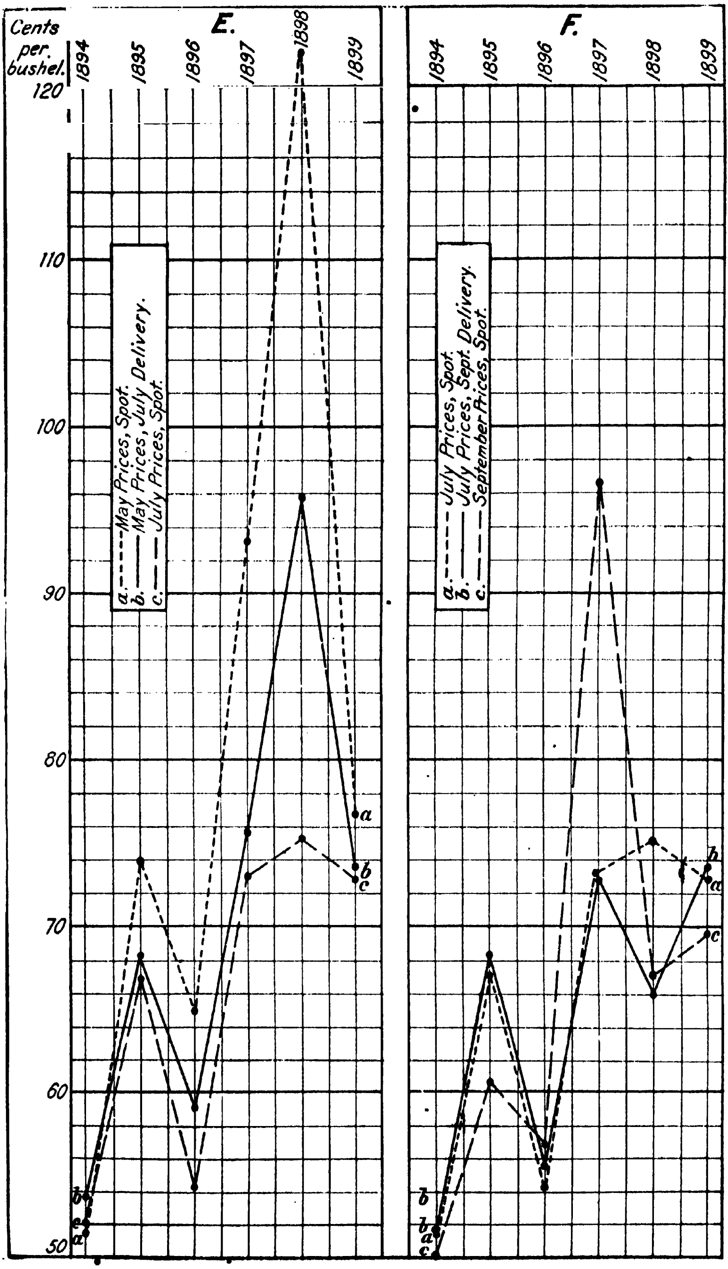


CHART C.—Showing course of May spot, July future, and July spot prices of winter wheat at Chicago for fifteen years.



CHARTS E AND F.—Course of wheat prices at St. Louis.



when May prices were below the preceding December prices, and 10 when they were higher. Moreover, as we have seen before, the average May price for 15 years is the highest of all other prices similarly obtained. At the same time the speculative price (December price of May wheat) was in 7 cases higher and in 8 lower than the anticipated price (May spot): i. e., the "bear" was about as many times successful as the "bull," with the balance in favor of the latter.

In other words, while the two sides of the market are trying, with nearly equal chances of success, to fix the maximum and minimum limits of the future price, the consensus of opinion of the market as a whole, expressed in the speculative price mutually agreed upon by contract, rightly fixes the May price above the December price, the subsequent actual May price proving that they were right in 2 cases out of every 3. Let us see how that works at a time when the new crop has yet to be estimated.

On first thought one would expect the prices after harvest time to be lower than before that period, for the reason that the stocks of available grain are increased by the new crop. On the whole that is true, as we have seen when analyzing the monthly averages of spot prices. Again, if the charges of the opponents of speculation in futures are true, that the object and effect of speculation is to depress the prices paid to the producer by fixing the "future" price at a uniformly lower rate than the spot, we should expect that the September and October "futures" in the month of July should be lower than July spot prices. What do we find to be the fact? Out of 15 years represented on the diagram there were only 6 years when July prices for September or October delivery were below the July spot prices, in the other 9 years the relation between the 2 sets of prices being reversed.

This, of course, is no more due to the kindly solicitude of the speculator for the welfare of the farmer than the opposite state of affairs, to any hidden conspiracy on the part of the former against the interests of the latter. It is all the result of concurrent forces and conditions which go to make up the totality of the market and which serve rather as a guide to the speculator in his movements than as a result of his action. Thus, if the outlook for the new crop is favorable, lower prices may be expected; if not, prices may go up still higher. There is, therefore, no room here for that uniformity which we saw in the relation of "futures" and "spots" after the harvest. Among the 9 years in which the October futures in July were above the July spot prices was the year 1885, when the July condition of winter wheat was 65 per cent; 1886, with the July condition of spring wheat at 83 per cent; 1887, with 83 per cent as the July condition of winter wheat and 79 for spring. In 1895, although the July condition of spring wheat was 102, it was as low as 65 for winter wheat and but 75 per cent for the continued winter and spring wheat when harvested.[1]

Comparing lines *b* and *c* in Diagram B, we find that in nine cases out of fifteen the price of September wheat (i. e., the "future" price) in July proved to be higher than the September spot prices; i. e., for every successful speculation of the "bull" there were two such of the "bear." That by no means implies that on the whole the "bear" is more successful in depressing prices than the "bull" in raising them. For, as we have seen, in 2 cases out of 3 the "bear" sold his "future" wheat at a higher price than the current one. What it does mean is that in trying to forecast the prospective maxima and minima of prices the "bulls" erred twice as many times as the "bears," since, as we have shown, the contract price roughly corresponds to the expected maximum of the "bear" and minimum of the "bull."

The degree of accuracy of the forecast of the future price may be determined by comparing the future prices for any month with the spot prices at the time the contract matures. By comparing the prices of October wheat in July and of spot wheat in October, we find that in 7 cases the "futures" were higher than the spot, the divergence from the spot expressed in per cent being 13, 7, 4.9, 6.2, 1.4, 5.8, and 18.5, respectively, making an average of 8.1 per cent. In 6 cases the "futures" were higher, as follows: 30 per cent, 1 per cent, 8.9 per cent, 9.4 per cent, 4.9 per cent, and 24.6 per cent, making an average of 13.1 per cent.

Assuming that the former difference roughly represents the losses of the "bulls," and the latter those of the "bears," it appears that on the whole the "short" seller fared worse than the "long" buyer. Of course no great accuracy is claimed for this estimate of the comparative losses of the two sides of the market; it does tend, however, to show that whether the one or the other side is the gainer, on the whole the losses and gains are pretty evenly distributed on both sides. Further, that such being the case, it is wrong to suppose that either side is the deciding factor in determining prices.

A similar comparison of the degree of accuracy of speculative forecasts might be made with the figures we have for cotton and for wheat in other markets, but the limits of space forbid that. Reference should be made here, however, to the work of Professor Cohn, who about 30 years ago made a collection of statistics to show this relation in the case of rye in Berlin, which have been brought down to 1890, with additional figures for wheat, by Dr. Kantorowicz. These figures show the prices of rye in May and June for future delivery in September-October, compared with spot prices in the latter months, and also the September-October prices for delivery at the May-June "termin" with like comparison.

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[1] Yearbook of the Department of Agriculture, 1899, p. 774.

Tables 9 and 10 have been copied to show the relation of the cash (spot) and the speculative or future prices of wheat in Berlin, Germany, which is one of the leading speculative markets in a consuming center.

In Table 12 the first set of figures gives spot prices for the 2 months of May and June and for July 1, the average of which is given below for the 2 months for each year.

In the second set of figures the future prices are given for the 2 months of September and October following the months of spot prices for the same years, and the average is given below for the 2 months of futures for each year.

The per cent of differences between spot and future prices is obtained by subtracting the average spot for a given year from the future average for that year and dividing this difference by the future average.

The differences in percentages are prefixed by a minus sign (−) when the average future price is less than the spot price realized at the time the future contract terminated, and by a plus sign (+) when the average future price is more than the spot price realized at the time the future contract terminated.

By a comparison of these differences thus expressed it is possible to show to what extent, in the long run, the speculative system of dealing in wheat favors the consumer and to what extent the producer.

TABLE 9.—*Prices of future and spot wheat (September-October wheat) in Berlin, Germany.*

[From Schmoller's Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft, 1891, pp. 226, 228.]

(Price per 100 kilos in thalers, 1866-1874; in marks, 1874-1890.)

MAY AND JUNE BIDS (FUTURES) FOR SEPTEMBER AND OCTOBER DELIVERY.

	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.
May 1..........	59.50	75.25	76.00	......	67.08	72.88	74.25	79.38	81.00	194.00	208.00	238.83	216.50
10..........	59.00	72.50	75.00	......	68.38	73.83	77.38	79.92	80.21	190.00	211.67	236.25	......
20..........	60.00	71.25	70.75	......	66.12	75.63	76.00	80.63	80.75	191.00	219.50	233.00	208.50
June 1..........	62.00	71.17	65.83	64.42	69.63	75.63	75.63	80.63	81.38	189.50	219.33	229.33	199.00
10..........	61.00	70.50	70.00	64.38	73.08	76.25	75.69	83.17	80.31	193.17	214.00	222.75	199.50
20..........	62.00	68.75	71.00	68.75	74.08	73.92	73.13	81.88	79.31	191.50	208.50	219.50	200.50
July 1..........	61.00	68.59	67.13	66.25	72.81	72.88	72.75	80.00	77.38	196.17	209.00	222.82	191.00
Average..	60.61	71.13	70.82	65.95	70.17	71.43	74.98	80.80	80.05	192.19	212.86	228.93	203.00

	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.
May 1..........	189.25	198.25	207.25	208.00	194.38	176.58	187.50	161.08	166.88	177.33	185.13	187.08
10..........	199.00	199.00	210.00	204.50	196.00	171.58	184.75	162.13	172.00	179.20	186.00	188.00
20..........	193.75	200.38	209.00	203.83	193.38	175.38	181.00	157.75	171.31	179.33	182.83	182.88
June 1..........	195.83	203.67	210.75	195.92	196.75	175.38	166.50	153.13	173.00	175.13	177.25	182.67
10..........	194.33	204.83	213.42	198.33	196.31	176.75	176.63	148.42	173.83	170.38	180.63	181.73
20..........	190.25	199.50	214.75	201.75	193.13	177.88	176.13	150.90	168.75	165.92	181.75	180.38
July 1..........	190.50	193.75	213.25	198.25	190.50	174.92	168.67	148.75	162.25	168.42	185.75	181.33
Average..	193.27	199.91	211.20	201.51	194.35	175.92	177.31	154.59	169.72	173.67	182.76	183.35

CASH PRICES (SPOT) FOR SEPTEMBER AND OCTOBER DELIVERY.

	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.
Sept. 1..........	64.50	73.25	66.25	69.25	73.56	75.00	81.44	88.88	65.38	207.17	189.17	224.17	190.50
10..........	67.00	81.50	65.50	67.00	73.63	79.50	82.88	89.63	60.25	205.50	198.00	222.75	181.75
20..........	69.00	81.69	66.75	63.75	73.50	79.19	81.67	87.88	61.00	199.75	200.00	224.25	176.75
Oct. 1..........	70.63	90.00	66.00	61.25	74.12	82.75	83.75	87.75	60.63	200.50	198.50	223.25	170.75
10..........	74.00	91.25	68.00	59.00	74.38	83.88	83.50	89.25	58.88	....	204.38	226.83	....
20..........	78.00	87.25	67.50	60.00	74.92	84.63	81.88	89.58	59.75	197.00	212.00	234.50	....
31..........	76.50	89.50	70.50	57.25	73.12	83.25	80.63	87.00	59.63	194.00	211.00	233.00	174.50
Average..	71.33	84.92	67.21	62.50	73.89	81.17	82.25	88.76	60.79	200.65	201.86	226.96	179.45

TABLE 9.—*Prices of future and spot wheat (September-October wheat) in Berlin Germany*—Continued.

CASH PRICES (SPOT) FOR SEPTEMBER AND OCTOBER—Continued.

	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.
Sept. 1	200.50	197.75	231.50	180.33	190.38	145.13	154.00	157.08	150.42	181.63	189.50	190.63
10	202.25	200.75	230.83	175.92	190.00	147.00	153.50	151.25	....	191.67	188.88	187.83
20	208.83	203.75	234.00	174.50	183.38	148.50	....	....	....	180.67	188.50	190.88
Oct. 1	215.25	212.50	239.50	169.13	179.00	149.38	153.88	....	146.67	184.08	187.50	190.92
10	....	221.83	233.50	175.25	179.38	148.00	161.31	....	....	187.38	186.50	187.06
20	....	209.00	231.50	180.75	....	149.00	159.58	148.58	....	....	183.75	195.25
31	227.50	211.50	231.50	198.83	174.75	150.75	156.50	149.25	158.50	190.00	183.25	198.50
Average	210.87	208.15	233.19	179.24	182.82	148.25	156.46	151.54	151.86	185.91	186.84	191.58

PER CENT OF DIFFERENCE BETWEEN AVERAGE FUTURE AND SPOT PRICES.

	Per cent.		Per cent.
1866	−15.04	1879	− 8.35
1867	−16.24	1880	− 3.96
1868	+ 5.37	1881	− 9.43
1869	+ 5.52	1882	+12.42
1870	− 5.03	1883	+ 6.31
1871	− 8.30	1884	+18.66
1872	− 8.84	1885	+13.33
1873	− 8.77	1886	+ 2.01
1874	+31.68	1887	+11.76
1875	− 4.22	1888	− 6.58
1876	+ 5.45	1889	− 2.18
1877	+ 0.87	1890	− 4.30
1878	+13.12		

TABLE 10.—*Prices of future and spot wheat (April-May wheat) in Berlin, Germany.*

[From Schmoller's Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft, 1891, p. 227, 229.]

(Price per 1,000 kilos, in thalers, 1866–1874; in marks, 1874–1890.)

SEPTEMBER AND OCTOBER BIDS (FUTURES) FOR APRIL AND MAY DELIVERY.

	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.
Sept. 1	64.50	73.50	65.00	68.50	73.50	73.94	78.50	86.13	198.50	222.50	203.25	212.00
10	67.00	78.75	63.62	66.96	....	78.38	79.42	86.63	191.50	217.50	206.50	213.67
20	70.25	79.50	64.00	65.25	72.50	76.75	82.00	86.58	191.50	210.25	208.00	214.25
Oct. 1	70.00	89.00	62.50	63.75	70.25	80.56	83.38	85.50	190.00	215.50	209.00	209.17
10	71.37	90.25	62.00	61.50	71.38	81.50	81.83	85.25	183.50	213.00	211.75	210.00
20	75.88	87.50	62.00	63.79	72.13	81.75	81.00	85.38	185.00	213.25	218.17	207.67
Nov. 1	74.63	90.75	62.00	61.50	74.25	80.00	80.58	85.78	183.25	210.50	215.50	208.00
Average	70.52	84.18	63.02	64.46	72.34	78.98	80.96	85.89	189.04	214.64	210.31	210.68

	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.
Sept. 1	195.13	214.00	195.25	225.33	184.67	202.25	158.00	166.92	167.67	164.17	....	196.50
10	188.25	215.00	195.25	226.08	178.00	203.00	158.83	166.50	162.42	....	....	195.00
20	185.00	222.50	203.00	227.25	175.00	196.25	159.50	165.83	162.25	159.00	....	193.88
Oct. 1	179.25	228.33	209.50	230.25	171.50	193.50	160.25	167.13	159.88	157.67	199.50	194.38
10	177.00	235.75	219.25	224.00	172.75	190.83	159.50	170.25	159.50	169.88	205.92	196.13
20	178.75	243.00	212.83	224.00	174.50	185.13	159.25	167.13	158.25	162.38	207.42	191.63
Nov. 1	183.50	240.00	215.50	223.33	173.25	186.00	161.00	164.70	157.42	168.38	208.25	190.42
Average	183.04	228.57	207.23	225.82	175.67	193.85	159.48	166.92	161.06	161.91	205.27	193.99

CASH (SPOT) PRICES FOR APRIL AND MAY DELIVERY.

	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.
Apr. 1	77.37	93.75	63.50	57.88	78.88	76.75	85.50	85.38	181.00	200.00	222.00	213.75
10	81.58	93.50	62.13	58.38	79.63	79.13	86.96	85.69	183.00	198.25	231.33	212.50
20	81.63	92.13	60.58	62.00	78.00	81.29	88.63	89.38	184.50	201.00	245.50	216.67
May 1	84.63	90.00	60.88	64.75	78.71	82.88	89.75	88.75	189.25	199.75	263.25	......
10	89.13	86.37	61.25	76.00	79.25	88.25	91.50	88.92	190.00	205.75	269.00	218.50
20	88.75	86.00	60.00	64.25	82.13	86.50	88.50	90.88	189.50	217.00	263.25	215.00
31	90.88	75.00	62.75	67.50	81.88	96.00	89.67	93.25	187.50	218.50	257.50	212.00
Average	84.85	88.11	61.58	63.11	79.78	84.40	88.64	88.89	186.39	205.75	250.26	214.74

TABLE 10.—*Prices of future and spot wheat (April-May wheat) in Berlin, Germany*—Continued.

CASH (SPOT) PRICES FOR APRIL AND MAY DELIVERY—Continued.

	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.
Apr. 1	175.50	216.31	213.17	225.58	187.25	165.68	165.13	156.38	167.00	164.08	188.83	196.25
10	181.00	216.75	215.00	227.38	189.17	167.25	171.00	153.58	170.88	172.58	184.00	195.00
20	180.00	214.00	221.75	229.38	192.00	166.50	173.75	154.50	172.13	172.50	184.25	195.75
May 1	185.83	216.25	222.25	230.50	191.25	169.75	180.38	153.00	176.30	....	....	198.50
10	195.75	221.25	223.88	229.50	....	168.75	176.00	152.50	181.17	176.00	188.13	203.75
20	....	223.25	225.75	227.50	197.00	170.31	174.50	151.75	185.00	....	184.44	201.92
31	196.00	224.75	228.50	228.50	199.25	169.25	171.75	149.00	187.50	173.00	178.50	199.50
Average	185.68	218.94	221.47	228.33	192.65	168.20	173.22	152.96	177.14	171.63	184.69	198.67

PER CENT OF DIFFERENCE BETWEEN AVERAGE FUTURE AND SPOT PRICES.

	Per cent.		Per cent.
1867	−16.90	1879	− 0.99
1868	− 4.46	1880	+ 4.31
1869	+ 2.34	1881	− 6.43
1870	+ 2.14	1882	− 1.09
1871	− 9.33	1883	− 8.81
1872	− 6.42	1884	+15.25
1873	− 8.66	1885	− 7.93
1874	− 3.37	1886	+ 9.13
1875	+ 1.42	1887	− 9.07
1876	+ 4.32	1888	− 5.66
1877	−15.96	1889	+11.14
1878	− 1.89	1890	− 2.36

The results of the figures for 40 years (1850-1890) give 1 case in which the predicted (speculative) price exactly agreed with the spot price, 43 cases in which it was below the spot price by an average of 8.75 per cent, and 36 cases in which it was above by an average of 9.28 per cent.[1] The results for Germany thus seem to agree quite well with those we obtained for the United States. The losses of the bears again exceed those of the bulls, the two pretty nearly balancing each other.

TABLE 11.—*Prices of cotton in New York.*

[Prices for 1880-1893 compiled from the tables of the report of the Senate Committee on Agriculture and Forestry, 1895. Prices for 1894-1899 compiled from the daily price tables furnished with this report.]

Year.	July.		October.		January.		(7) April—spot.
	(1) Spot.	(2) October future.	(3) Spot.	(4) January future.	(5) Spot.	(6) April future.	
1880-81	....	....	11.25	10.97	11.88	12.12	10.74
1881-82	11.50	10.52	11.64	11.84	11.97	12.57	12.22
1882-83	12.81	11.91	11.40	10.79	10.16	10.38	10.20
1883-84	10.04	9.86	10.61	10.80	10.67	11.06	11.80
1884-85	11.03	10.64	9.95	10.03	11.12	11.29	10.75
1885-86	10.33	9.76	9.80	9.74	9.25	9.38	9.23
1886-87	9.55	9.31	9.34	9.18	9.52	9.64	10.67
1887-88	10.55	9.57	9.54	9.45	10.58	10.68	9.78
1888-89	10.62	9.55	9.89	9.68	9.88	9.91	10.70
1889-90	11.23	9.94	10.61	10.02	10.59	10.72	11.20
1890-91	12.11	10.66	10.28	10.12	9.36	9.49	8.94
1891-92	8.25	8.12	8.57	8.65	7.53	7.42	7.06
1892-93	7.35	7.36	8.11	8.14	9.72	9.67	8.06
1893-94	8.07	8.09	8.36	8.34	8.08	8.02	7.58
1894-95	7.11	6.95	6.00	5.77	5.72	5.59	6.72
1895-96	7.04	6.88	8.99	8.85	8.28	8.05	7.94
1896-97	7.28	6.40	8.08	7.99	7.31	7.14	7.44
1897-98	7.95	7.09	6.29	6.16	5.91	5.77	6.30
1898-99	6.15	5.93	5.40	5.28	6.16	5.88	6.19
1899	6.16	5.68	7.38	7.09	....	....	....

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[1] Emery on Speculation, p. 132.

TABLE 12.—*Prices of cotton in Liverpool.*

[Compiled from the same sources as Table 11.]

Year.	July.		October.		January.		(7) April—Spot.
	(1) Spot.	(2) October future.	(3) Spot.	(4) January future.	(5) Spot.	(6) April future.	
1880-81	....	....	13.47	12.70	13.25	13.50	11.95
1881-82	13.02	11.89	13.25	12.95	13.34	13.59	13.34
1882-83	13.90	13.27	13.09	12.34	11.31	11.43	11.31
1883-84	10.94	10.94	12.00	11.84	11.91	12.15	12.37
1884-85	12.49	12.12	11.44	11.21	11.91	12.16	11.88
1885-86	11.15	10.96	10.82	10.65	10.03	10.07	10.08
1886-87	10.57	10.21	10.50	9.95	10.47	10.41	11.31
1887-88	11.52	10.55	10.47	10.18	11.22	11.23	10.65
1888-89	11.12	10.40	11.71	10.72	11.00	10.91	11.75
1889-90	12.28	11.16	12.19	11.14	11.69	11.72	12.58
1890-91	13.06	11.73	11.41	11.15	10.37	10.44	9.65
1891-92	9.03	9.06	9.57	9.54	8.09	8.19	7.31
1892-93	7.95	8.01	8.75	8.73	10.43	10.42	8.87
1893-94	8.93	9.89	9.25	8.99	8.66	8.60	8.25
1894-95	7.88	7.76	6.63	6.39	6.06	6.02	7.05
1895-96	7.38	7.39	9.48	9.39	9.14	8.81	8.78
1896-97	7.81	7.05	9.08	8.43	7.99	7.88	8.17
1897-98	8.48	7.86	7.30	6.71	6.44	6.31	7.05
1898-99	6.86	6.62	6.15	5.92	6.39	6.33	6.74
1899	6.69	6.48	7.89	7.63	....	....	....

TABLE 13.—*Prices of cotton in New Orleans.*

[Same sources as Table 11.]

Year.	July.		October.		January.		(7) April—spot.
	(1) Spot.	(2) October future.	(3) Spot.	(4) January future.	(5) Spot.	(6) April future.	
1880-81	....	....	11.15	10.67	11.50	11.76	10.52
1881-82	11.30	10.28	11.13	11.54	11.59	12.40	12.00
1882-83	12.73	11.56	10.88	10.51	9.67	10.14	9.69
1883-84	9.61	9.48	10.48	10.48	10.43	10.67	11.54
1884-85	10.81	10.29	9.72	9.74	10.47	10.79	10.48
1885-86	9.86	9.37	9.23	9.29	8.69	9.04	8.76
1886-87	9.14	9.00	8.84	8.74	9.00	9.29	10.16
1887-88	9.94	9.05	8.94	8.95	9.83	10.13	9.39
1888-89	9.84	9.01	9.38	9.23	9.56	9.61	10.40
1889-90	10.98	9.59	9.78	9.57	10.09	10.33	11.26
1890-91	11.53	10.17	9.89	9.74	9.27	9.14	8.58
1891-92	7.91	7.78	8.15	8.29	6.99	6.99	6.75
1892-93	7.05	7.03	7.66	7.79	9.42	9.45	7.72
1893-94	7.52	7.71	7.92	8.01	7.47	....	7.19
1894-95	6.83	....	5.44	....	5.11	....	6.06
1895-96	6.69	....	8.78	....	7.89	....	7.70
1896-97	6.64	....	7.31	....	6.97	....	7.17
1897-98	7.71	....	5.87	....	5.26	....	5.66
1898-99	5.79	....	5.00	....	5.45	....	5.67
1899	5.70	....	6.86	....	....	....	....

We will now examine Table 11, with the corresponding charts G and H, to see whether the relations between future and spot prices we have observed in the case of wheat hold good for cotton also.

Let us again compare spot and future prices after the harvest. As the cotton harvest closes later in the year than the wheat, we will take in this case the price of April cotton in January and compare it first with spot January prices; second, with spot April prices.

It appears that in 11 years out of 19 the price of April cotton in January was higher than January spot and in 8 years it was lower. It will be remembered that in the corresponding case of wheat prices the future was uniformly higher than the spot. This difference in results is again due to the fact that the buyer is not insured against receiving a poorer grade than middling and the consequent discount in the future price.

In comparing the wheat prices for May and December we found that in 10 out of 15 years May prices were highest, and that the average May price for 15 years was the highest of all the monthly averages. In the case of cotton there is less

CHART G.—Showing course of spot and future prices of cotton at New York. Table 11, columns (5), (6), and (7), p. 207.

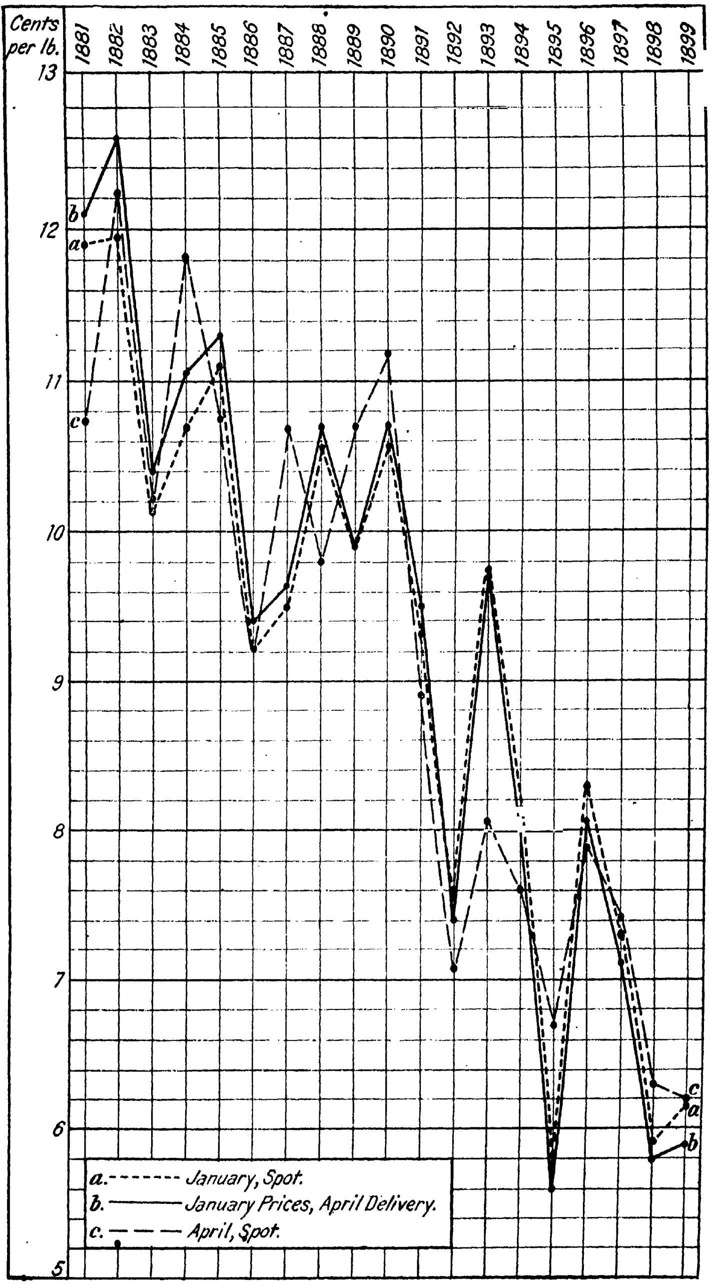


CHART II.—Showing course of spot and future prices of cotton at New York. Table 11, columns (1), (2), and (3), p. 207.

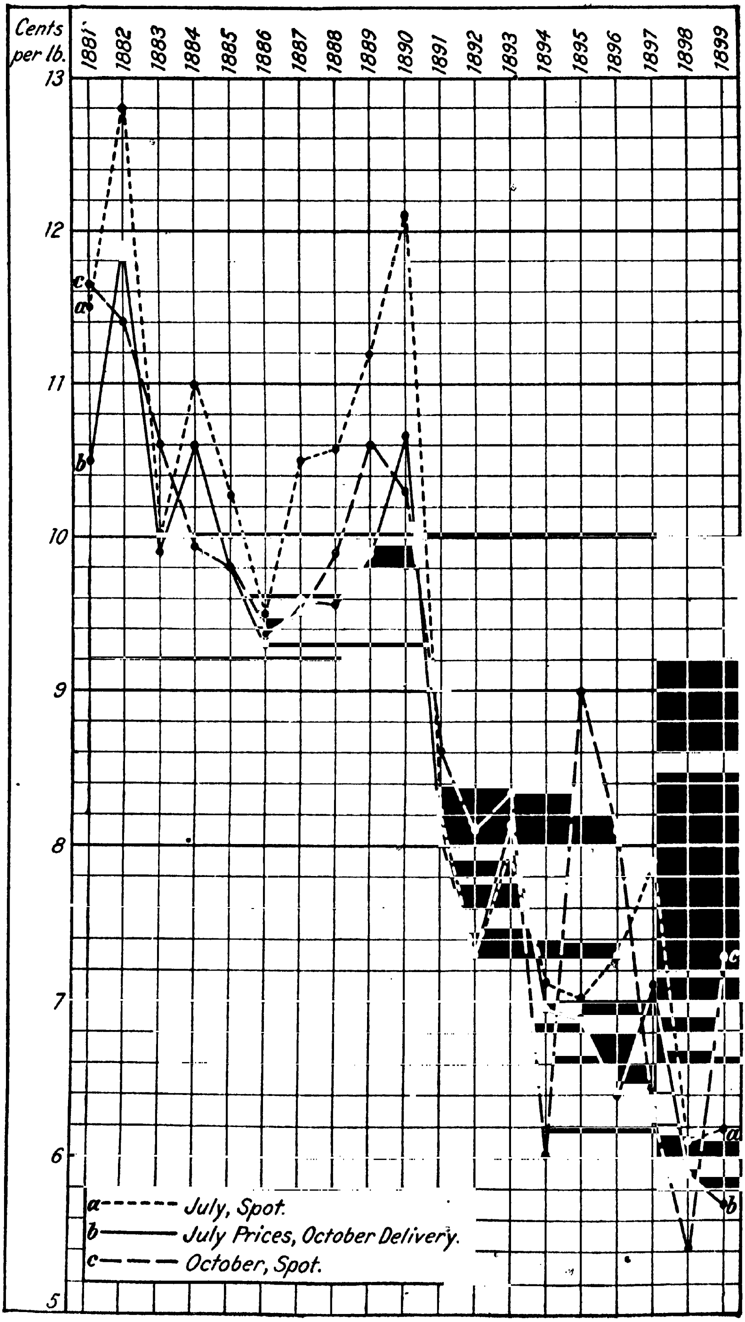


CHART J.—Showing course of spot and future prices of cotton at New Orleans. Table 13, columns (5), (6) and (7), p. 208.

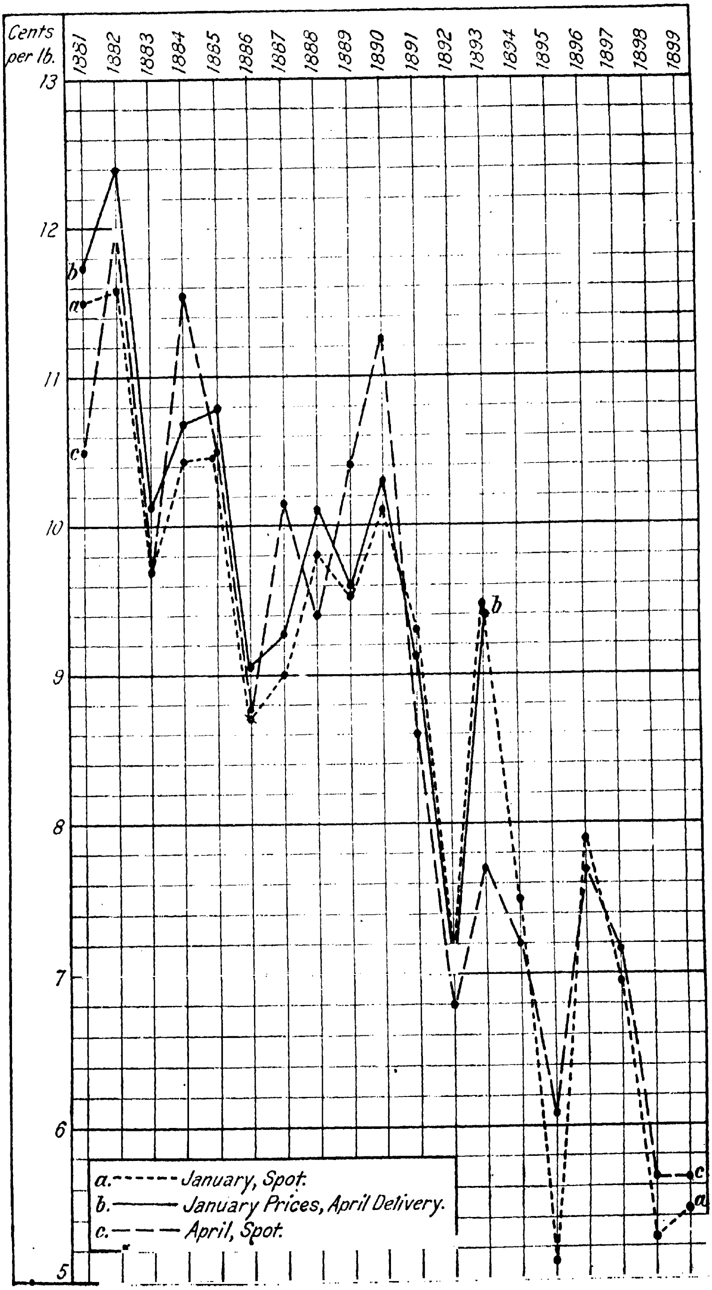
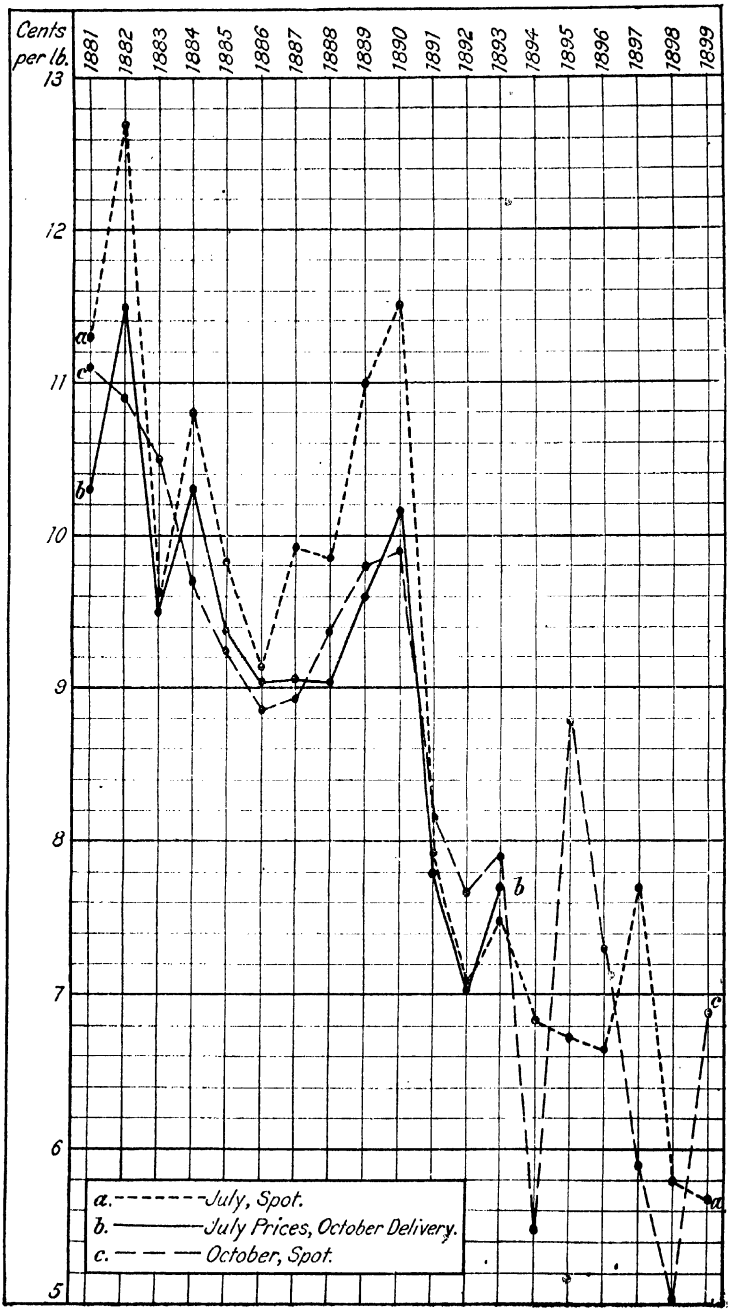


CHART K.—Showing course of spot and future prices of cotton at New Orleans. Table 13, columns (1), (2), and (3), p. 208.



regularity. Ten years show a higher April price as compared with January and 9 a lower. Comparing the April spot with the October spot prices we get the same result. All of which does not tend to show that the dealers and speculators are always able to get a higher price for the cotton several months after the harvest than what they paid to producers during and immediately after the harvest.

We will now take the time preceding the harvest. With but two exceptions we find that July prices of October cotton were lower during the 20 years, 1880–1899, than the July spot prices. This is as it should be when we consider that the July stocks of available cotton are among the lowest in the year, and that the July prices of spot cotton must include cost of storage, interest, etc., for about 10 months. However, the lower price of "futures" may be due to a great extent also to the admission of poorer grades at the time of settlement of the contract, to which frequent reference has been made. But that, withal, the lower price of futures is not due to a cunning design on the part of the speculators to depress the October spot prices may be seen from the fact that in 7 cases out of 19 the October price in July proved to be higher than the October spot price, and the number of such cases would be still greater were not the spot prices of middling cotton generally fixed at a higher level than the corresponding future prices as a means of insurance against poorer grades.

Moreover, while it would be perfectly proper to expect lower prices of cotton in October as compared with those in July, for reasons given above, we find that in the face of that and in the face of the working of a supposedly hostile and all-powerful force (speculation) October prices were higher than in July during 8 years. The causes which are responsible for such a seeming anomaly have been sufficiently dwelt upon in discussing the similar phenomenon in wheat prices not to need further explanation here.

The Tables 11, 12, and 13 were prepared especially to show the relation between spot and future prices of cotton at different places. They contain corresponding averages by months for New Orleans, New York, and Liverpool, so that corresponding quotations at these three markets may be compared.

It has been contended that the future price, as a matter of fact, is always less than the spot price. These figures do not sustain any such contention if, for example, we compare October future in July with the spot price realized in October. Out of 57 different futures (columns 2, 4, 6) compared with the spot prices realized (columns 3, 5, 7) in the New York cotton market, from 1881–82 to 1899, in 29 cases the futures proved to be higher than the spots realized 3 months hence, and in 28 cases the future prices were lower than the spots at maturity—that is, the speculative judgment anticipated the realized value of cotton a little too favorably in half of the cases and not quite favorably enough in the other half.

In the Liverpool market, out of 57 cases of comparison of future bids with spot prices realized at the expiration of the contract period (columns 2, 4, 6, compared with columns 3, 5, 7, respectively), it appears that in 30 cases the future prices were lower than the spot prices realized at maturity of contract, and in 27 cases the future prices were higher than the spot prices realized at maturity. In the New Orleans market, out of 57 cases, in 25 of them the future price was lower than the spot price realized 3 months later, and in 26 cases the future price was higher than the spot price.

These results would seem to support the conclusion that in the long run the speculative quotations for future delivery are neither uniformly above nor below the level of the proper cash value of cotton as determined at the future date, but that they are tentative anticipations of such realizable value as the conditions of the supply and demand are most likely to determine at the time when the future contract matures.

4. DAILY QUOTATIONS OF SPOT COTTON COMPARED AT NEW ORLEANS, NEW YORK, AND LIVERPOOL, 1894-1899.

[Continuation of Senate Report No. 986, Pt. 2, Fifty-third Congress, third session, 1895.]

The following daily quotations of spot cotton (middling grades) in New Orleans, New York, and Liverpool have been prepared as a continuation of the "Daily quotations of spot cotton" and the "Daily quotations of cotton futures," given in the Senate report of the Committee on Agriculture and Forestry on "Condition of cotton growers in the United States, the present prices of cotton, and the remedy; and on cotton consumption and production." That report, known as the "George report," brought its cotton quotations down to the end of 1893. Consequently the following compilation begins with the beginning of 1894 and ends with the end of the year 1899.

The daily quotations for a given month are arranged in parallel columns in cents per pound, the Liverpool quotations being reduced to cents at the same equivalent as was used in the "George report," namely, 2 cents to the penny. Instead, however, of giving the parts of a cent in fractions, decimals are used, so that the difference between quotations of any two markets on a given date may be the more readily arrived at without reducing fractions to a common denominator. This change will facilitate the comparisons for which the tables have been prepared.

A comparison of spot quotations at these three markets at the beginning, at the middle, and at the end of the month of January, for example, during these 6 years (from 1894 to 1899, inclusive) gives the range of differences between the spot prices at the places in question. These 18 quotations at each place show that the New York spot price ranged from 0.24 to 0.60 of a cent higher than the New Orleans price, and that the Liverpool price ranged from 0.81 of a cent to 1.31 cents higher than the New Orleans price for spot cotton. By averaging the 18 differences we find that as a rule the New York spot price is slightly over a half a cent (0.55) above the New Orleans spot, and that the Liverpool price is but a little over a cent (1.09) higher than the New Orleans price.

It is conservatively estimated by those familiar with the expenses of the distribution of cotton that on the average it costs a half a cent per pound to market cotton from producers to consumers in our domestic markets and 1 cent to market it in English or continental markets. This corresponds approximately with the statistical results reached above, and leads to the conclusion that the difference in spot prices of any given date are on the average substantially equal to the cost of distribution for cotton from the primary market to the place of consumption.

In Appendix B the daily closing prices bid for future cotton at New York and Liverpool for 6 years, 1894-1899, are given.

Daily quotations of spot cotton (middling) in New Orleans.

[From the Commercial and Financial Chronicle.]

Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1894.												
1	Hol.	7.44	7.31	Sun.	7.00	7.06	Sun.	6.62	6.44	5.62	5.19	5.31
2	7.25	7.38	7.31	7.31	6.94	7.12	6.88	6.62	Sun.	5.56	5.19	Sun.
3	7.31	7.38	7.31	7.31	6.88	Sun.	6.88	6.62	6.44	5.62	5.19	5.31
4	7.44	Sun.	Sun.	7.31	6.88	7.12	Hol.	6.62	6.44	5.69	Sun.	5.25
5	7.44	7.38	7.25	7.31	6.88	7.12	6.88	Sun.	6.50	5.75	5.19	5.19
6	7.44	....	7.25	7.31	Sun.	7.12	6.88	6.62	6.50	5.75	Hol.	5.19
7	Sun.	7.38	7.31	7.31	6.88	7.12	6.88	6.62	6.50	Sun.	5.12	5.25
8	7.56	7.38	7.31	Sun.	6.81	7.12	Sun.	6.62	6.50	5.75	5.00	5.25
9	7.62	7.31	7.31	7.31	6.81	7.06	6.88	6.62	Sun.	5.75	5.00	Sun.
10	7.62	7.31	7.25	7.25	6.81	Sun.	6.88	6.62	6.50	5.69	5.00	5.19
11	7.69	Sun.	Sun.	7.25	6.81	7.06	6.88	6.62	6.50	5.56	Sun.	5.19
12	7.81	7.31	7.19	7.25	6.94	7.06	6.88	Sun.	6.44	5.50	4.94	5.19
13	7.75	7.25	7.12	7.12	Sun.	7.06	6.88	6.62	6.44	5.44	4.88	5.12
14	Sun.	7.25	7.12	7.06	6.94	7.06	6.88	6.62	6.44	Sun.	5.06	5.12
15	7.75	7.25	7.12	Sun.	6.94	7.06	Sun.	6.62	6.44	5.44	5.06	5.12
16	7.69	7.25	7.19	7.06	6.88	7.06	6.88	6.62	Sun.	5.44	5.06	Sun.
17	7.62	7.31	7.12	7.00	6.81	Sun.	6.88	6.62	6.38	5.44	5.06	5.12
18	7.50	Sun.	Sun.	7.06	6.81	7.00	6.88	6.62	6.31	5.38	Sun.	5.12
19	7.50	7.31	7.12	7.06	6.81	7.00	6.88	Sun.	6.25	5.38	5.12	5.12
20	7.44	7.25	7.12	7.00	Sun.	7.00	6.88	6.62	6.12	5.31	5.12	5.12
21	Sun.	7.25	7.12	7.00	6.81	7.00	6.81	6.62	6.06	Sun.	5.25	5.06
22	7.38	Hol.	7.19	Sun.	6.81	7.00	Sun.	6.56	6.00	5.31	5.25	5.06
23	7.31	7.12	Hol.	7.00	6.88	7.00	6.81	6.50	Sun.	5.31	5.38	Sun.
24	7.31	7.06	Hol.	7.00	6.94	Sun.	6.75	6.50	6.00	5.31	5.50	Hol.
25	7.31	Sun.	Sun.	7.00	6.94	7.00	6.75	6.50	5.94	5.31	Sun.	Hol.
26	7.31	7.06	7.19	7.06	7.00	7.00	6.75	Sun.	5.81	5.25	5.50	5.06
27	7.44	7.06	7.19	7.06	Sun.	7.00	6.75	6.50	5.88	5.25	5.50	5.06
28	Sun.	7.19	7.19	7.38	7.00	6.94	6.75	6.50	5.81	Sun.	5.44	5.12
29	7.44	....	7.25	Sun.	7.00	6.88	Sun.	6.44	5.69	5.25	Hol.	5.12
30	7.44	....	7.25	7.06	Hol.	6.88	6.75	6.44	Sun.	5.25	5.31	Sun.
31	7.44	....	7.25	....	7.06	....	6.62	6.44	....	5.19	....	Hol.
1895.												
1	Hol.	5.00	5.06	5.75	6.12	7.00	6.69	6.50	Sun.	8.75	8.62	Sun.
2	5.12	5.00	5.12	5.81	6.19	Sun.	6.69	6.50	Hol.	8.75	8.62	8.19
3	5.06	Sun.	Sun.	5.81	6.19	7.00	6.69	6.62	7.69	8.75	Sun.	8.12
4	5.06	5.00	5.12	5.81	6.19	7.00	Hol.	Sun.	7.69	8.81	8.62	8.06
5	5.06	5.00	5.12	5.75	Sun.	7.00	6.69	6.62	7.69	8.81	8.62	8.00
6	Sun.	5.00	5.12	5.75	6.19	7.00	6.75	6.62	7.69	Sun.	8.56	8.00

Daily quotations of spot cotton (middling) in New Orleans—Continued.

Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1895.												
7	5.06	5.06	5.25	Sun.	6.19	7.00	Sun.	6.62	7.75	8.69	8.56	8.00
8	5.06	5.12	5.25	5.81	6.19	7.00	6.75	6.69	Sun.	8.81	8.50	Sun.
9	5.12	5.06	5.31	5.81	6.25	Sun.	6.75	6.75	7.75	8.88	8.38	8.06
10	5.12	Sun.	Sun.	5.88	6.25	7.00	6.75	7.00	7.94	8.88	Sun.	8.12
11	5.12	5.06	5.31	5.88	6.25	7.00	6.75	Sun.	7.94	8.94	8.38	8.12
12	5.12	5.06	5.44	Hol.	Sun.	7.00	6.75	7.00	7.88	8.94	8.25	8.12
13	Sun.	5.06	5.44	Hol.	6.25	6.94	6.75	7.12	7.88	Sun.	8.25	8.12
14	5.12	5.06	5.50	Sun.	6.25	6.94	Sun.	7.12	7.81	9.00	8.19	8.12
15	5.12	5.06	5.56	6.12	6.25	6.94	6.75	7.12	Sun.	9.12	8.06	Sun.
16	5.12	5.06	5.75	6.19	6.25	Sun.	6.69	7.12	7.81	9.12	8.12	8.12
17	5.12	Sun.	Sun.	6.31	6.44	6.94	6.69	7.06	7.75	9.19	Sun.	8.12
18	5.12	5.06	5.75	6.31	6.50	6.94	6.69	Sun.	7.69	9.12	8.12	8.12
19	5.19	5.12	5.75	6.31	Sun.	6.94	6.69	7.06	7.81	9.06	8.12	8.06
20	Sun.	5.12	5.81	6.38	6.56	6.81	6.69	7.12	7.88	Sun.	8.12	7.94
21	5.19	5.19	5.88	Sun.	6.56	6.81	Sun.	7.12	7.94	8.12	8.12	7.88
22	5.12	Hol.	5.88	6.38	6.75	6.81	6.69	7.25	Sun.	8.12	8.12	Sun.
23	5.06	5.19	5.81	6.38	6.75	Sun.	6.62	7.25	8.06	8.38	8.12	7.81
24	5.06	Sun.	Sun.	6.38	6.81	6.75	6.62	7.38	8.12	8.31	Sun.	7.69
25	5.06	5.12	5.88	6.31	6.75	6.69	6.56	Sun.	8.25	8.31	8.19	Hol.
26	5.06	Hol.	5.88	6.25	Sun.	6.62	6.56	7.38	8.44	8.31	8.31	7.81
27	Sun.	5.12	5.81	6.25	6.75	6.62	6.56	7.38	8.50	Sun.	8.31	7.81
28	5.06	5.06	5.81	Sun.	6.75	6.62	Sun.	7.56	8.88	8.31	Hol.	7.75
29	5.06	....	5.75	6.25	6.75	6.62	6.56	7.56	Sun.	8.50	8.31	Sun.
30	5.06	....	5.75	6.25	Hol.	Sun.	6.56	7.69	8.75	8.50	8.31	7.78
31	5.00	....	Sun.	....	6.81	....	6.50	7.56	....	8.62	....	7.88
1896.												
1	Hol.	8.00	Sun.	7.75	7.62	7.38	6.81	6.81	7.50	7.62	Sun.	7.38
2	7.88	Sun.	7.38	7.75	7.62	7.38	6.81	Sun.	7.62	7.62	7.31	7.38
3	7.94	7.94	7.38	Hol.	Sun.	7.19	Hol.	6.81	7.88	7.62	Hol.	7.38
4	7.88	7.88	7.38	Hol.	7.69	7.12	Hol.	6.81	7.88	Sun.	7.19	7.25
5	Sun.	7.88	7.38	Sun.	7.75	7.12	Sun.	7.00	7.88	7.56	7.19	7.19
6	7.88	7.88	7.38	7.75	7.75	7.06	6.81	7.00	Sun.	7.44	7.19	Sun.
7	7.88	7.88	7.44	7.75	7.75	Sun.	6.81	7.12	7.94	7.38	7.38	7.19
8	7.81	7.88	Sun.	7.75	7.75	7.12	6.81	7.50	8.12	7.25	Sun.	7.12
9	7.81	Sun.	7.50	7.75	7.75	7.00	6.75	Sun.	8.12	7.25	7.50	7.06
10	7.81	7.81	7.56	7.75	Sun.	6.88	6.75	7.25	8.12	7.25	7.50	7.06
11	7.88	7.75	7.56	7.69	7.75	6.88	6.75	7.31	8.00	Sun.	7.50	6.94
12	Sun.	7.69	7.62	Sun.	7.75	6.88	Sun.	7.31	7.81	7.25	7.50	7.19
13	7.88	7.69	7.62	7.69	7.75	6.88	6.69	7.31	Sun.	7.25	7.50	Sun.
14	7.81	7.75	7.62	7.69	7.75	Sun.	6.62	7.31	7.81	7.25	7.38	6.81
15	7.81	7.69	Sun.	7.69	7.75	6.94	6.50	7.38	7.81	7.19	Sun.	6.75
16	7.81	Sun.	7.62	7.69	7.69	7.00	6.50	Sun.	7.81	7.19	7.25	6.81
17	7.81	7.62	7.62	7.69	Sun.	7.00	6.50	7.38	7.81	7.19	7.31	6.81
18	7.81	Hol.	7.69	7.69	7.69	7.00	6.50	7.75	7.75	Sun.	7.31	6.81
19	Sun.	7.56	7.81	Sun.	7.69	6.94	Sun.	7.69	7.75	7.25	7.19	6.81
20	7.81	7.62	7.81	7.69	7.69	7.00	6.50	7.75	Sun.	7.19	7.25	Sun.
21	7.94	7.62	7.75	....	7.69	Sun.	6.50	7.94	7.81	7.19	7.25	6.75
22	7.94	Hol.	Sun.	7.69	7.62	7.00	6.50	8.00	7.81	7.12	Sun.	6.75
23	8.00	Sun.	7.75	7.69	7.56	6.94	6.50	Sun.	7.81	7.19	7.25	6.75
24	8.00	7.62	7.75	7.69	Sun.	6.94	6.50	7.88	7.69	7.19	7.19	6.75
25	8.00	7.62	7.62	7.69	7.56	6.88	6.50	7.75	7.69	Sun.	7.19	Hol.
26	Sun.	7.62	7.62	Sun.	7.50	6.88	Sun.	7.62	7.62	7.19	Hol.	Hol.
27	8.00	7.56	7.62	7.62	7.44	6.88	6.50	7.44	Sun.	7.19	7.25	Sun.
28	8.00	7.56	7.62	7.62	7.44	Sun.	6.56	7.44	7.75	7.19	7.31	6.75
29	8.00	7.50	Sun.	7.62	7.38	6.88	6.52	7.38	7.75	7.25	Sun.	6.69
30	8.00	....	7.62	7.62	Hol.	6.81	6.69	Sun.	7.75	7.25	7.31	6.75
31	8.00	....	7.75	....	Sun.	....	6.69	7.38	....	7.31	....	6.75
1897.												
1	Hol.	6.94	7.19	6.94	7.56	7.38	7.62	Sun.	7.06	6.06	5.50	5.25
2	Hol.	6.94	7.19	6.94	Sun.	7.38	7.62	7.69	7.06	6.00	Hol.	5.25
3	Sun.	6.94	7.12	7.06	7.56	7.38	Hol.	7.69	7.06	Sun.	5.44	5.25
4	6.88	6.94	7.06	Sun.	7.50	7.38	Sun.	7.69	7.06	6.00	5.38	5.25
5	6.88	6.94	7.06	7.06	7.50	7.38	Hol.	7.69	Sun.	6.06	5.38	Sun.
6	6.88	6.94	7.00	7.06	7.50	Sun.	7.69	7.69	7.00	6.12	5.38	5.25
7	6.88	Sun.	Sun.	7.06	7.50	7.38	7.69	7.69	6.94	6.12	Hol.	5.25
8	6.88	6.88	7.00	7.06	7.56	7.44	7.69	Sun.	6.88	6.12	5.25	5.25
9	7.00	6.81	7.00	7.06	Sun.	7.44	7.69	7.69	6.88	6.12	5.25	5.25
10	Sun.	6.81	7.00	7.12	7.56	7.44	7.69	7.69	6.88	Sun.	5.25	5.25
11	7.00	6.81	7.00	Sun.	7.56	7.44	Sun.	7.69	6.81	6.12	5.31	5.25
12	7.00	Hol.	7.00	7.12	7.50	7.44	7.69	7.69	Sun.	6.06	5.31	Sun.
13	7.00	6.69	7.00	7.00	7.50	Sun.	7.69	7.69	6.81	6.00	5.25	5.25
14	7.00	Sun.	Sun.	7.19	7.50	7.44	7.75	7.69	6.75	6.00	Sun.	5.25
15	7.00	6.75	7.00	7.19	7.50	7.44	7.75	Sun.	6.75	6.00	5.25	5.25
16	6.94	6.81	7.00	Hol.	Sun.	7.44	7.75	7.69	6.69	6.00	5.31	5.25
17	Sun.	6.88	7.00	Hol.	7.44	7.50	7.81	7.44	6.62	Sun.	5.31	5.25
18	6.94	6.88	7.00	Sun.	7.44	7.50	Sun.	7.12	6.50	5.94	5.31	5.25
19	6.94	6.94	7.00	7.12	7.44	7.56	7.81	7.12	Sun.	5.88	5.31	Sun.

Daily quotations of spot cotton (middling) in New Orleans—Continued.

Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1897.												
20	6.94	6.94	7.00	7.12	7.38	Sun.	7.75	7.12	6.62	5.88	5.25	5.25
21	6.94	Sun.	Sun.	7.19	7.38	7.50	7.75	7.06	6.44	5.88	Sun.	5.31
22	6.94	Hol.	6.94	7.19	7.38	7.56	7.75	Sun.	6.44	5.88	5.25	5.31
23	7.00	6.94	6.94	7.19	Sun.	7.56	7.75	7.06	6.38	5.75	5.25	5.38
24	Sun.	7.00	6.94	7.31	7.31	7.56	7.75	7.19	6.38	Sun.	5.25	5.38
25	7.00	7.06	6.94	Sun.	7.38	7.56	Sun.	7.19	6.19	5.75	Hol.	Hol.
26	7.00	7.06	6.94	7.38	7.38	7.56	7.75	7.19	Sun.	5.69	5.25	Sun.
27	7.00	7.19	6.94	7.38	7.38	Sun.	7.75	7.19	6.12	5.62	5.25	Hol.
28	7.00	Sun.	Sun.	7.50	7.38	7.56	7.75	7.19	6.12	5.62	Sun.	5.38
29	7.00	....	6.94	7.56	7.38	7.56	7.75	Sun.	6.12	5.56	5.25	5.38
30	6.94	....	6.94	7.56	Sun.	7.62	7.75	7.19	6.06	5.50	5.25	5.38
31	Sun.	....	6.94	....	7.38	....	7.69	7.12	....	Sun.	....	5.38
1898.												
1	Hol.	5.25	5.69	5.56	Sun.	6.06	5.94	5.69	5.38	4.88	4.81	5.00
2	Sun.	5.25	5.75	5.56	5.75	6.06	Hol.	5.69	5.38	Sun.	4.81	5.00
3	Hol.	5.25	5.75	Sun.	5.69	6.06	Sun.	5.69	5.38	4.88	4.81	5.00
4	5.38	5.25	5.75	5.56	5.69	6.06	Hol.	5.69	Sun.	4.88	4.81	Sun.
5	5.38	5.31	5.75	5.56	5.69	Sun.	5.88	5.69	5.38	4.94	4.81	5.00
6	5.31	Sun.	Sun.	5.56	5.69	6.06	5.88	5.69	5.38	5.00	Sun.	5.00
7	5.31	5.31	5.75	5.56	5.69	6.06	5.88	Sun.	5.31	5.00	4.75	5.00
8	5.31	5.44	5.75	....	Sun.	6.06	5.88	5.69	5.31	....	Hol.	5.00
9	Sun.	5.56	5.75	5.56	5.69	6.06	5.88	5.69	5.31	Sun.	4.75	5.12
10	5.31	5.56	5.69	Sun.	5.69	6.06	Sun.	5.69	5.31	....	4.75	5.12
11	5.31	5.56	5.62	5.56	5.69	6.06	5.81	5.69	Sun.	....	4.75	Sun.
12	5.25	5.62	5.62	5.56	5.69	Sun.	5.81	5.69	5.31	....	4.81	5.25
13	5.25	Sun.	Sun.	5.56	5.69	6.06	5.81	5.62	5.31	....	Sun.	5.25
14	5.25	5.62	5.56	5.62	5.69	6.06	5.81	Sun.	5.25	....	4.81	5.25
15	5.25	5.56	5.56	5.62	Sun.	6.06	5.81	5.62	5.19	5.00	4.81	5.25
16	Sun.	5.50	5.56	5.62	5.69	6.06	5.81	5.56	5.19	Sun.	4.81	5.25
17	5.25	5.50	5.56	Sun.	5.75	6.06	Sun.	5.50	5.12	5.00	4.81	5.25
18	5.19	5.50	5.56	5.69	5.81	6.06	5.81	5.50	Sun.	5.00	4.81	Sun.
19	5.19	5.50	5.56	5.69	5.88	Sun.	5.75	5.50	5.12	4.94	4.81	5.25
20	5.25	Sun.	Sun.	5.81	5.88	6.00	5.81	5.50	5.06	4.94	Sun.	5.25
21	5.25	5.50	5.56	5.81	5.88	6.00	5.62	Sun.	5.00	4.94	4.88	5.19
22	5.25	Hol.	5.56	5.81	Sun.	6.00	5.62	5.50	5.00	5.25	4.94	5.19
23	Sun.	5.56	5.50	5.81	5.94	6.00	5.62	5.44	5.00	Sun.	4.94	5.19
24	5.25	5.56	5.50	Sun.	6.00	6.00	Sun.	5.44	4.94	4.94	Hol.	Hol.
25	5.25	5.56	5.44	5.75	6.00	5.94	5.62	5.38	Sun.	4.94	4.94	Sun.
26	5.25	5.69	5.44	5.75	6.06	Sun	5.62	5.38	4.88	4.94	5.00	Hol.
27	5.25	Sun.	Sun.	5.75	6.06	5.94	5.62	5.38	4.88	4.88	Sun.	5.19
28	5.25	5.69	5.50	5.75	6.06	5.94	5.69	Sun.	4.88	4.88	5.06	5.19
29	5.25	....	5.50	5.75	Sun.	5.94	5.69	5.38	4.88	4.88	5.06	5.19
30	Sun.	....	5.56	5.75	6.06	5.94	5.69	5.38	4.88	Sun.	5.00	5.19
31	....	....	5.56	....	6.06	....	Sun.	5.38	....	4.81	....	Hol.
1899.												
1	Sun.	5.75	6.00	Hol.	5.69	5.75	5.62	5.75	5.94	Sun.	6.88	7.44
2	Hol.	5.75	6.00	Sun.	5.69	5.75	Sun.	5.75	5.81	....	6.94	7.50
3	5.19	5.69	6.00	5.75	5.69	5.75	....	5.75	Sun.	....	6.94	Sun.
4	5.19	5.75	6.00	5.69	5.69	Sun.	Hol.	5.75	Hol.	....	7.12	7.50
5	5.19	Sun.	Sun.	5.69	5.69	5.75	5.62	5.75	5.75	....	Sun.	7.44
6	5.19	5.75	6.06	5.69	5.81	....	5.62	Sun.	5.88	....	7.19	7.38
7	5.25	5.75	6.06	5.69	Sun.	5.75	5.62	5.75	6.00	6.94	Hol.	7.38
8	Sun.	5.75	6.06	5.69	5.81	5.75	5.75	5.75	6.00	Sun.	7.31	7.38
9	5.31	5.75	6.00	Sun.	5.88	5.75	Sun.	5.75	5.94	6.94	7.44	7.38
10	5.31	5.75	6.00	5.69	5.88	5.75	5.75	5.75	Sun.	6.94	7.44	Sun.
11	5.31	5.81	6.12	5.69	5.88	Sun.	5.69	5.81	5.94	6.94	7.25	7.38
12	5.31	Sun.	Sun.	5.69	5.88	5.75	5.69	5.88	5.94	6.81	Sun.	7.38
13	5.31	Hol.	5.88	5.69	5.88	5.75	5.69	Sun.	5.94	6.81	7.12	7.38
14	5.31	Hol.	5.88	5.69	Sun.	5.75	5.69	5.88	5.94	6.81	7.12	7.38
15	Sun.	6.00	5.88	5.62	5.81	5.75	5.62	5.88	5.94	Sun.	7.12	7.38
16	5.31	6.00	5.88	Sun.	5.81	5.75	Sun.	5.75	5.94	6.81	7.12	7.31
17	5.31	6.00	5.88	5.69	5.81	5.75	5.69	5.75	Sun.	6.75	7.12	Sun.
18	5.38	6.00	5.81	5.69	5.81	Sun.	5.69	5.75	5.94	6.75	7.12	7.19
19	5.44	Sun.	Sun.	5.69	5.81	5.75	5.81	5.75	6.00	6.88	Sun.	7.19
20	5.44	6.00	5.75	5.69	5.81	5.69	5.75	Sun.	6.06	6.88	7.12	7.25
21	5.50	6.00	5.69	5.69	Sun.	5.62	5.75	5.75	6.19	6.88	7.12	7.25
22	Sun.	Hol.	5.69	5.69	5.75	5.62	5.75	5.88	6.25	Sun.	7.19	7.25
23	5.56	6.00	5.69	Sun.	5.75	5.62	Sun.	5.88	6.25	6.88	7.19	Hol.
24	5.62	6.00	5.69	5.69	5.75	5.56	5.75	5.88	Sun.	6.81	7.31	Sun.
25	5.62	6.00	5.69	5.69	5.75	Sun.	5.75	5.88	6.38	6.81	7.38	Hol.
26	5.69	Sun.	Sun.	5.69	5.75	5.56	5.75	5.94	6.38	6.81	Sun.	7.31
27	5.69	6.00	5.69	5.69	5.75	5.56	5.75	Sun.	6.38	6.81	7.44	7.31
28	5.75	6.00	5.69	5.69	Sun.	5.56	5.75	5.94	6.50	6.81	7.44	7.44
29	Sun.	....	5.69	5.69	5.75	5.50	5.75	5.94	....	Sun.	7.44	7.44
30	5.75	....	5.75	Sun.	5.75	5.50	Sun.	5.94	....	6.88	Hol.	Hol.
31	5.75	....	Hol.	....	5.75	....	5.75	5.94	....	6.88	....	Sun.

Daily quotations of spot cotton middling (upland) in New York.

[Compiled from the files of the Commercial and Financial Chronicle, New York.]

Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1894.												
1	Hol.	8.00	7.62	Sun.	7.38	7.44	Sun.	6.94	Hol.	7.25	5.75	5.81
2	7.94	7.94	7.62	7.75	7.31	7.44	7.25	6.88	Sun.	6.25	5.75	Sun.
3	8.00	7.94	7.62	7.75	7.31	Sun.	7.31	6.88	Hol.	6.25	5.75	5.81
4	8.06	Sun.	Sun.	7.75	7.25	7.31	Hol.	6.94	6.88	6.25	Sun.	5.75
5	8.06	7.94	7.56	7.75	7.25	7.38	7.25	Sun.	6.94	6.31	5.75	5.75
6	8.06	7.94	7.56	7.75	Sun.	7.38	7.25	6.81	6.94	6.25	Hol.	5.75
7	Sun.	8.00	7.62	7.75	7.25	7.44	7.25	6.88	6.94	Sun.	5.69	5.75
8	8.19	8.00	7.62	Sun.	7.25	7.38	Sun.	6.88	6.94	6.25	5.62	5.75
9	8.19	7.94	7.62	7.75	7.25	7.38	7.19	6.94	Sun.	6.19	5.62	Sun.
10	8.19	8.06	7.56	7.69	7.25	Sun.	7.19	6.88	6.88	6.12	5.62	5.75
11	8.25	Sun.	Sun.	7.62	7.31	7.31	7.19	6.94	6.88	6.12	Sun.	5.75
12	8.19	8.00	7.50	7.62	7.31	7.31	7.19	Sun.	6.88	6.06	5.56	5.69
13	8.25	7.94	7.50	7.56	Sun.	7.31	7.12	7.00	6.88	6.06	5.56	5.69
14	Sun.	7.94	7.50	7.56	7.31	7.31	7.12	7.00	6.88	Sun.	5.69	5.75
15	8.19	7.94	7.50	Sun.	7.25	7.31	Sun.	7.00	6.88	6.00	5.62	6.00
16	8.12	7.94	7.50	7.56	7.25	7.31	7.12	7.00	Sun.	6.00	5.62	Sun.
17	8.06	7.94	7.50	7.56	7.19	Sun.	7.12	7.00	6.75	6.00	5.62	6.00
18	8.06	Sun.	Sun.	7.56	7.12	7.25	7.12	7.00	6.75	5.94	Sun.	6.00
19	8.00	7.94	7.50	7.56	7.19	7.25	7.12	Sun.	6.75	5.94	5.69	6.00
20	7.94	7.88	7.50	7.56	Sun.	7.25	7.06	6.94	6.69	5.88	5.69	6.00
21	Sun.	7.88	7.56	7.56	7.19	7.31	7.06	6.94	6.69	Sun.	5.81	5.94
22	7.88	Hol.	7.56	Sun.	7.19	7.31	Sun.	6.94	6.69	5.88	5.81	5.94
23	7.88	7.75	Hol.	7.50	7.19	7.31	7.06	6.94	Sun.	5.94	5.88	Sun.
24	7.94	7.62	Hol.	7.50	7.25	Sun.	7.00	7.00	6.62	5.88	6.00	Hol.
25	8.06	Sun.	Sun.	7.50	7.25	7.31	7.00	7.00	6.56	5.81	Sun.	Hol.
26	8.06	7.62	7.56	7.50	7.25	7.31	7.00	Sun.	6.50	5.81	6.00	5.94
27	8.06	7.62	7.56	7.50	Sun.	7.31	7.00	6.94	6.50	5.81	6.00	5.94
28	Sun.	7.62	7.56	7.44	7.19	7.25	7.00	6.88	6.44	Sun.	5.94	5.94
29	8.12	....	7.69	Sun.	7.25	7.25	Sun.	6.88	6.31	5.75	Hol.	5.75
30	8.06	....	7.69	7.38	Hol.	7.25	6.94	6.88	Sun.	5.75	6.12	Sun.
31	8.06	....	7.75	....	7.25	....	6.94	6.88	....	5.75	....	Hol.
1895.												
1	Hol.	5.62	5.56	6.44	6.81	7.25	7.12	7.12	Sun.	9.06	9.00	Sun.
2	5.69	5.62	5.62	6.38	6.81	Sun.	7.12	7.12	Hol.	9.00	8.94	8.56
3	5.69	Sun.	Sun.	6.38	6.81	7.25	7.19	7.12	8.25	9.12	Sun.	8.50
4	5.69	5.62	5.62	6.38	6.81	7.25	Hol.	Sun.	8.25	9.12	9.00	8.44
5	5.69	5.62	5.62	6.38	Sun.	7.25	7.12	7.19	8.25	9.12	Hol.	8.38
6	Sun.	5.62	5.69	6.38	6.81	7.25	7.12	7.19	8.25	Sun.	8.94	8.38
7	5.69	5.62	5.88	Sun.	6.81	7.25	Sun.	7.25	8,25	9,12	8.94	8.38
8	5.69	5.62	5.81	6.38	6.81	7.25	7.19	7.25	Sun.	9.12	8.81	Sun.
9	5.75	5.62	5.94	6.38	6.81	Sun.	7.19	7.25	8.38	9.19	8.75	8.44
10	5.75	Sun.	Sun.	6.50	6.75	7.25	7.12	7.38	8.38	9.19	Sun.	8.56
11	5.75	5.62	5.94	6.56	6.75	7.25	7.12	Sun.	8.31	9.12	8.75	8.50
12	5.75	5.62	6.00	Hol.	Sun.	7.25	7.12	7.56	8.19	9.12	8.62	8.50
13	Sun.	5.62	6.00	Hol.	6.75	7.25	7.06	7.56	8.25	Sun.	8.62	8.56
14	5.75	5.62	6.00	Sun.	6.81	7.25	Sun.	7.56	8.25	9.19	8.56	8.56
15	5.75	5.62	6.06	6.81	6.81	7.19	7.00	7.56	Sun.	9.38	8.44	Sun.
16	5.75	5.62	6.25	6.81	6.81	Sun.	7.00	7.56	8.12	9.38	8.44	8.56
17	5.75	Sun.	Sun.	6.88	6.88	7.25	7.00	7.56	8.25	9.31	Sun.	8.56
18	5.75	5.62	6.19	6.94	7.00	7.19	7.00	Sun.	8.19	9.25	8.44	8.50
19	5.75	5.62	6.25	6.94	Sun.	7.19	7.00	7.56	8.25	9.12	8.38	8.38
20	Sun.	5.62	6.38	7.00	7.12	7.19	7.00	7.56	8.25	Sun.	8.38	8.31
21	5.75	5.62	6.38	Sun.	7.12	7.19	Sun.	7.62	8.25	8.62	8.38	8.25
22	5.69	5.62	6.31	6.94	7.31	7.19	7.00	7.62	Sun.	8.62	8.50	Sun.
23	5.69	5.62	6.31	6.94	7.31	Sun.	7.00	7.75	8,38	8.62	8.56	8.25
24	5.69	Sun.	Sun.	6.94	7.31	7.06	7.00	7.81	8.44	8.50	Sun.	8.25
25	5.69	5.56	6.38	6.94	7.38	7.00	7.00	Sun.	8.62	8.56	8.62	Hol.
26	5.69	5.56	6.31	6.94	Sun.	7.00	7.00	7.81	8.75	8.62	8.62	8.25
27	Sun.	5.56	6.31	6.94	7.31	7.00	7.00	7.94	8.88	Sun.	8.62	8.25
28	5.62	5.56	6.31	Sun.	7,31	7.00	Sun.	8.06	8.88	8.69	Hol.	8.25
29	5.62	....	6.31	6.94	7.38	7.00	7.00	8.19	Sun.	8.88	8.62	Sun.
30	5.62	....	6.44	6.94	Hol.	Sun.	7.00	8.19	9.12	9.00	8.56	8.25
31	5.62	....	Sun.	....	7.31	....	7.06	8.19	....	9.00	....	8.38
1896.												
1	Hol.	8.25	Sun.	7.88	8.12	8.00	7.44	7.44	8.19	8.38	Sun.	7.69
2	8.31	Sun.	7.69	7.88	8.25	7.88	7.44	Sun.	8.31	8.38	8.19	7.69
3	8.31	8.25	7.69	Hol.	Sun.	7.75	Hol.	7.44	8.50	8.38	Hol.	7.69
4	8.31	8.25	7.69	Hol.	8.31	7.75	Hol.	7.50	8.50	Sun.	8.19	7.56
5	Sun.	8.25	7.62	Sun.	8.38	7.75	Sun.	7.88	8.50	8.19	8.12	7.56
6	8.31	8.25	7.62	7.88	8.38	7.75	7.44	8.12	Sun.	8.12	8.12	Sun.
7	8.19	8.25	7.62	7.88	8.38	Sun.	7.44	8.12	Hol.	8.00	8.12	7.56
8	8.31	8.25	Sun.	7.88	8.31	7.75	7.44	8.00	8.75	7.94	Sun.	7.44
9	8.25	Sun.	7.69	7.88	8.25	7.62	7.44	Sun.	8.75	7.94	8.19	7.44
10	8.31	8.19	7.75	7.88	Sun.	7.44	7.44	8.12	8.88	7.94	8.19	7.38
11	8.31	8.19	7.75	7.88	8.25	7.44	7.38	8.06	8.75	Sun.	8.12	7.38

Daily quotations of spot cotton middling (upland) in New York—Continued.

Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1896.												
12	Sun.	Hol.	7.75	Sun.	8.31	7.44	Sun.	8.00	8.62	7.94	8.12	7.38
13	8.25	8.12	7.69	7.88	8.31	7.44	7.19	8.00	Sun.	8.00	8.00	Sun.
14	8.19	8.12	7.69	7.88	8.25	Sun.	7.19	8.19	8.62	7.94	8.00	7.12
15	8.19	8.00	Sun.	7.88	8.25	7.69	7.06	8.19	8.75	7.94	Sun.	7.19
16	8.19	Sun.	7.69	7.94	8.25	7.75	7.06	Sun.	8.75	7.94	7.75	7.19
17	8.19	7.88	7.88	7.94	Sun.	7.75	7.12	8.19	8.62	7.94	7.75	7.19
18	8.19	7.88	8.00	7.94	8.25	7.62	7.12	8.44	8.50	Sun.	7.69	7.19
19	Sun.	7.88	8.00	Sun.	8.25	7.62	Sun.	8.31	8.62	7.94	7.69	7.19
20	8.19	7.88	7.94	7.94	8.31	7.62	7.12	8.44	Sun.	7.94	7.62	Sun.
21	8.31	7.88	7.94	7.94	8.25	Sun.	7.12	8.62	8.62	7.94	7.62	7.12
22	8.31	Hol.	Sun.	8.00	8.12	7.62	7.12	8.62	8.56	7.94	Sun.	7.12
23	8.31	Sun.	7.88	8.06	8.12	7.62	7.19	Sun.	8.56	8.00	7.62	7.12
24	8.31	7.88	7.88	8.06	Sun.	7.62	7.19	8.38	8.56	8.00	7.62	7.12
25	8.31	7.88	7.81	8.06	8.12	7.50	7.19	8.38	8.44	Sun.	7.62	Hol.
26	Sun.	7.88	7.81	Sun.	8.06	7.50	Sun.	8.19	8.44	7.94	Hol.	Hol.
27	8.25	7.81	7.88	8.06	8.06	7.50	7.19	8.19	Sun.	7.94	7.69	Sun.
28	8.25	7.81	7.88	8.12	8.00	Sun.	7.31	8.00	8.44	7.94	7.69	7.06
29	8.25	7.81	Sun.	8.12	8.00	7.44	7.44	7.88	8.44	7.94	Sun.	7.06
30	8.25	....	7.88	8.18	Hol.	7.44	7.44	Sun.	8.38	7.94	7.69	7.06
31	8.25	....	7.94	....	Sun.	....	7.44	7.88	....	8.12	....	7.19
1897.												
1	Hol.	7.31	7.44	7.31	7.75	7.75	7.88	Sun.	7.81	6.50	6.00	5.81
2	Hol.	7.25	7.38	7.31	Sun.	7.75	7.88	8.00	7.81	6.50	Hol.	5.81
3	Sun.	7.25	7.31	7.38	7.75	7.75	Hol.	8.00	7.62	Sun.	6.00	5.81
4	7.12	7.31	7.19	Sun.	7.62	7.75	Sun.	8.00	7.50	6.50	6.00	5.88
5	7.06	7.31	7.19	7.44	7.62	7.69	Hol.	8.00	Sun.	6.62	6.00	Sun.
6	7.12	7.31	7.19	7.38	7.62	Sun.	7.88	8.00	Hol.	6.62	6.00	5.88
7	7.19	Sun.	Sun.	7.38	7.69	7.69	7.88	8.00	7.50	6.62	Sun.	5.88
8	7.19	7.25	7.25	7.38	7.75	7.69	7.88	Sun.	7.50	6.50	5.88	5.88
9	7.38	7.25	7.25	7.44	Sun.	7.69	7.94	8.00	7.50	6.50	5.88	5.88
10	Sun.	7.19	7.25	7.44	7.69	7.69	7.94	8.00	7.50	Sun.	5.88	5.88
11	7.25	7.19	7.25	Sun.	7.75	7.69	Sun.	8.00	7.44	6.44	5.94	5.88
12	7.31	Hol.	7.25	7.44	7.75	7.69	7.94	8.00	Sun.	6.38	5.88	Sun.
13	7.31	7.00	7.25	7.44	7.81	Sun.	7.94	8.00	7.38	6.38	5.88	5.88
14	7.31	Sun.	Sun.	7.44	7.81	7.69	7.94	8.00	7.38	6.38	Sun.	5.88
15	7.31	7.00	7.25	7.44	7.88	7.69	7.94	Sun.	7.38	6.31	5.81	5.88
16	7.25	7.06	7.25	Hol.	Sun.	7.75	8.00	8.00	7.12	6.31	5.88	5.88
17	Sun.	7.06	7.25	Hol.	7.75	7.75	8.00	8.00	7.00	Sun.	5.88	5.88
18	7.19	7.12	7.25	Sun.	7.75	7.75	Sun.	8.00	6.88	6.19	5.88	5.88
19	7.25	7.12	7.38	7.31	7.75	7.81	8.00	8.00	Sun.	6.19	5.88	Sun.
20	7.31	7.12	7.38	7.31	7.75	Sun.	8.00	7.88	6.88	6.19	5.81	5.88
21	7.31	Sun.	Sun.	7.44	7.75	7.88	7.94	7.88	6.81	6.19	Sun.	5.88
22	7.31	Hol.	7.38	7.44	7.75	7.88	7.94	Sun.	6.81	6.12	5.81	5.88
23	7.31	7.12	7.38	7.44	Sun,	7.81	7.94	8.00	6.75	6.12	5.81	5.94
24	Sun.	7.12	7.31	7.50	7.69	7.75	7.94	8.00	6.75	Sun.	5.81	5.94
25	7.25	7.25	7.31	Sun.	7.75	7.75	Sun.	8.06	6.75	6.06	Hol.	Hol.
26	7.31	7.31	7.31	7.62	7.75	7.75	7.94	8.06	Sun.	6.06	5.81	Sun.
27	7.31	7.44	7.31	Hol.	7.75	Sun.	7.94	8.06	6.62	6.06	5.81	Hol.
28	7.31	Sun.	Sun.	7.69	7.75	7.75	7.94	8.06	6.62	6.06	Sun.	5.94
29	7.31	....	7.31	7.69	7.62	7.81	8.00	Sun.	6.50	6.00	5.81	5.94
30	7.31	....	7.31	7.75	Sun.	7.81	8.00	8.25	6.50	6.00	5.81	5.94
31	Sun.	....	7.31	....	Hol.	....	8.00	8.00	....	Sun.	....	5.94
1898.												
1	Hol.	5.94	6.31	6.19	Sun.	6.56	6.25	6.06	5.81	5.38	5.31	5.56
2	Sun.	5.94	6.31	6.19	6.31	6.50	Hol.	6.06	5.81	Sun.	5.31	5.62
3	Hol.	5.94	6.31	Sun.	6.31	6.50	Sun.	6.06	5.75	5.38	5.31	5.62
4	5.94	5.94	6.31	6.19	Hol.	6.50	Hol.	6.06	Sun.	5.38	5.31	Sun.
5	5.94	5.94	6.31	6.19	6.38	Sun.	6.25	6.06	Hol.	5.44	5.31	5.62
6	5.94	Sun.	Sun.	6.19	6.38	6.50	6.25	6.06	5.75	5.44	Sun.	5.62
7	5.94	6.06	6.25	6.19	6.38	6.50	6.19	Sun.	5.75	5.44	5.31	5.62
8	5.94	6.06	6.25	6.19	Sun.	6.50	6.19	6.06	5.69	5.44	Hol.	5.75
9	Sun.	6.25	6.25	6.19	6.38	6.50	6.19	6.12	5.69	Sun.	5.31	5.81
10	5.94	6.25	6.25	Sun.	6.38	6.50	Sun.	6.06	5.81	5.38	5.31	5.81
11	5.94	6.25	6.19	6.19	6.38	6.56	6.19	6.06	Sun.	5.38	5.31	Sun.
12	5.94	Hol.	6.12	6.19	6.38	Sun.	6.19	6.06	5.81	5.38	5.31	5.81
13	5.94	Sun.	Sun.	6.19	6.38	6.56	6.19	6.00	5.81	5.38	Sun.	5.81
14	5.88	6.25	6.12	6.19	6.38	6.56	6.19	Sun.	5.75	5.38	5.38	5.81
15	5.88	6.25	6.12	6.25	Sun.	6.56	6.19	6.00	5.69	5.38	5.38	5.81
16	Sun.	6.25	6.12	6.31	6.38	6.56	6.19	6.00	5.69	Sun.	5.38	5.81
17	5.88	6.25	6.12	Sun.	6.38	6.56	Sun.	5.88	5.62	5.44	5.38	5.81
18	5.88	6.25	6.12	6.25	6.44	6.50	6.19	5.88	Sun.	5.44	5.38	Sun.
19	5.88	6.25	6.12	6.25	6.44	Sun.	6.19	5.88	5.62	5.44	5.38	5.81
20	5.88	Sun.	Sun.	6.44	6.44	6.44	6.12	Hol.	5.62	5.50	Sun.	5.81
21	5.88	6.25	6.12	6.44	6.44	6.38	6.12	Sun.	5.56	5.50	5.44	5.81
22	5.88	Hol.	6.12	6.44	Sun.	6.38	6.06	6.75	5.56	5.50	5.44	5.81
23	Sun.	6.25	6.06	6.44	6.44	6.38	6.06	5.75	5.44	Sun.	5.44	5.88

Daily quotations of spot cotton middling (upland) in New York—Continued.

Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1898.												
24	5.88	6.25	6.06	Sun.	6.44	6.38	Sun.	5.75	5.44	5.44	Hol.	Hol.
25	5.88	6.25	6.06	6.38	6.44	6.38	6.06	5.75	Sun.	5.44	5.44	Sun.
26	5.94	6.31	6.06	6.38	6.50	Sun.	6.06	5.75	5.31	5.44	5.50	Hol.
27	5.94	Sun.	Sun.	6.31	6.56	6.38	6.06	5.75	5.38	5.38	Sun.	5.88
28	5.94	6.31	6.12	6.31	6.56	6.38	6.06	Sun.	5.38	5.38	5.62	5.88
29	5.94	....	6.12	6.38	Sun.	6.38	6.06	5.75	5.38	5.31	5.62	5.88
30	Sun.	....	6.19	6.38	Hol.	6.31	6.06	5.75	5.44	Sun.	5.56	5.88
31	5.94	....	6.19	....	6.56	....	Sun.	5.75	....	5.31	....	Hol.
1899.												
1	Sun.	6.38	6.56	Hol.	6.19	6.25	6.12	6.12	6.25	Sun.	7.38	7.81
2	Hol.	6.38	6.56	Sun.	6.12	6.25	Sun.	6.12	6.25	7.19	7.56	7.75
3	5.88	6.31	6.56	6.25	6.12	6.25	Hol.	6.12	Sun.	7.19	7.56	Sun.
4	5.88	6.31	6.56	6.19	6.12	Sun.	Hol.	6.12	Hol.	7.25	7.56	7.75
5	5.88	Sun.	Sun.	6.19	6.19	6.25	6.12	6.12	6.25	7.31	Sun.	7.75
6	5.88	6.44	6.56	6.19	6.19	6.25	6.12	Sun.	6.31	7.31	7.52	7.69
7	5.94	6.44	6.56	6.19	Sun.	6.31	6.12	6.12	6.50	7.31	Hol.	7.69
8	Sun.	6.44	6.56	6.19	6.25	6.31	6.19	6.19	6.44	Sun.	7.81	7.69
9	6.00	6.44	6.56	Sun.	6.25	6.31	Sun.	6.25	6.44	7.31	7.75	7.69
10	6.06	6.44	6.44	6.19	6.25	6.31	6.19	6.38	Sun.	7.25	7.62	Sun.
11	6.06	6.50	6.44	6.19	6.25	Sun.	6.19	6.50	6.44	7.25	7.62	7.69
12	6.06	Sun.	Sun.	6.19	6.25	6.31	6.19	6.50	6.38	7.25	Sun.	7.69
13	6.06	Hol.	6.38	6.12	6.25	6.31	6.19	Sun.	6.38	7.19	7.50	7.69
14	6.06	6.56	6.38	6.12	Sun.	6.31	6.19	6.38	6.38	7.25	7.50	7.69
15	Sun.	6.62	6.44	6.12	6.19	6.31	6.19	6.31	6.38	Sun.	7.56	7.69
16	6.00	6.62	6.38	Sun.	6.19	6.31	Sun.	6.19	6.38	7.25	7.56	7.69
17	6.00	6.62	6.38	6.31	6.25	6.31	6.19	6.19	Sun.	7.25	7.56	Sun.
18	6.12	6.62	6.31	6.31	6.25	Sun.	6.19	6.19	6.38	7.38	7.56	7.50
19	6.12	Sun.	Sun.	6.25	6.25	6.31	6.25	6.19	6.38	7.38	Sun.	7.50
20	6.12	6.56	6.19	6.25	6.25	6.25	6.19	Sun.	6.44	7.38	7.56	7.56
21	6.25	6.56	6.19	6.25	Sun.	6.06	6.19	6.31	6.62	7.38	7.56	7.56
22	Sun.	Hol.	6.31	6.25	6.25	6.12	6.19	6.31	6.62	Sun.	7.56	7.56
23	6.38	6.56	6.31	Sun.	6.25	6.12	Sun.	6.31	6.62	7.31	7.62	Hol.
24	6.31	6.50	6.31	6.25	6.25	6.06	6.19	6.25	Sun.	7.31	7.75	Sun.
25	6.38	6.50	6.31	6.25	6.25	Sun.	6.12	6.25	6.75	7.31	Hol.	Hol.
26	6.38	Sun.	Sun.	6.12	6.25	6.00	6.12	6.25	6.75	7.31	Sun.	7.62
27	6.38	6.56	6.31	6.12	6.25	6.06	6.12	Sun.	6.88	7.31	7.81	7.56
28	6.38	6.56	6.31	6.19	Sun.	6.06	6.12	6.25	6.88	7.38	7.81	7.69
29	Sun.	....	6.31	6.19	6.25	6.06	6.12	6.25	Hol.	Sun.	7.75	7.69
30	6.38	....	6.31	Sun.	Hol.	6.06	Sun.	6.25	Hol.	7.38	Hol.	Hol.
31	6.44	....	Hol.	....	6.25	....	6.12	6.19	....	7.38	....	Sun.

Daily quotations of spot cotton (middling uplands) in Liverpool. (Liverpool prices reduced to American money at the rate of 2 cents to a penny.)

[Compiled from the Commercial and Financial Chronicle.]

Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1894.												
1	Hol.	8.50	8.25	Sun.	8.00	8.12	Sun.	7.62	7.62	6.88	6.25	6.19
2	8.50	8.50	8.38	8.38	8.00	8.12	7.88	7.62	Sun.	6.81	6.25	Sun.
3	8.62	8.50	8.38	8.38	7.88	Sun.	7.88	7.62	7.69	6.88	6.25	6.19
4	8.62	Sun.	Sun.	8.38	7.88	8.12	7.88	Hol.	7.69	6.94	Sun.	6.25
5	8.62	8.50	8.38	8.38	7.88	8.12	8.00	Sun.	4.69	7.00	6.25	6.19
6	8.62	8.50	8.38	8.38	Sun.	8.12	8.00	Hol.	7.81	6.94	6.25	6.19
7	Sun.	8.50	8.38	8.38	7.88	8.12	8.00	Hol.	7.81	Sun.	6.25	6.31
8	8.75	8.50	8.38	Sun.	7.88	8.12	Sun.	7.62	7.75	6.81	6.12	6.25
9	8.75	8.50	8.38	8.38	7.88	8.12	8.00	7.75	Sun.	6.81	6.06	Sun.
10	8.75	8.50	8.25	8.38	7.88	Sun.	7.88	7.75	Hol.	6.81	6.06	6.25
11	8.75	Sun.	Sun.	8.38	7.88	8.12	7.88	7.69	7.75	6.75	Sun.	6.19
12	8.88	8.50	8.25	8.38	8.00	8.12	7.88	Sun.	7.75	6.69	5.94	6.19
13	8.88	8.50	8.25	8.25	Sun.	8.12	7.88	7.69	7.69	6.69	6.00	6.19
14	Sun.	8.50	8.25	8.25	Hol.	8.12	7.88	7.75	7.69	Sun.	6.06	6.19
15	8.88	8.50	8.25	Sun.	8.00	8.12	Sun.	7.75	7.69	6.62	6.06	6.25
16	8.75	8.50	8.25	8.25	7.88	8.12	7.88	7.69	Sun.	6.62	6.00	Sun.
17	8.75	8.50	8.25	8.25	Hol.	Sun.	7.88	7.69	7.56	6.69	6.00	6.19
18	8.75	Sun.	Sun.	8.25	....	8.12	7.88	7.69	7.50	6.62	Sun.	6.12
19	8.75	8.50	8.25	8.25	Hol.	8.12	7.88	Sun.	7.50	6.56	6.06	6.12

Daily quotations of spot cotton (middling uplands) in Liverpool. (Liverpool prices reduced to American money at the rate of 2 cents to a penny.)—Continued.

Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1894.												
20	8.62	8.50	8.25	8.25	Sun.	8.12	7.88	7.69	7.44	6.50	6.06	6.12
21	Sun.	8.38	8.25	8.25	7.88	8.12	7.88	7.62	7.44	Sun.	6.12	6.06
22	8.50	8.38	8.25	Sun.	7.88	8.12	Sun.	7.69	7.31	6.44	6.25	6.06
23	8.50	8.38	Hol.	8.12	7.88	8.12	7.88	7.69	Sun.	6.44	6.25	Sun.
24	8.50	8.25	Hol.	8.12	8.00	Sun.	7.81	7.69	7.31	6.50	6.38	Hol.
25	8.50	Sun.	Sun.	8.12	8.00	8.12	7.81	7.69	7.19	6.44	Sun.	Hol.
26	8.50	8.12	Hol.	8.12	8.00	8.12	7.81	Sun.	7.19	6.44	6.31	Hol.
27	8.50	8.12	Hol.	8.12	Sun.	8.12	7.75	7.69	7.12	6.38	6.44	6.06
28	Sun.	8.25	8.25	8.12	8.00	8.00	7.75	7.62	7.12	Sun.	6.38	6.12
29	8.50	....	8.25	Sun.	8.00	7.88	Sun.	7.62	7.06	6.31	6.31	6.12
30	8.50	....	8.38	8.12	8.00	7.88	7.75	7.62	Sun.	6.31	6.31	Sun.
31	8.50	....	8.38	....	8.12	....	7.56	7.62	....	6.31	....	Hol.
1895.												
1	Hol.	5.94	6.00	6.69	7.12	Hol.	7.44	7.38	Sun.	9.62	9.56	Sun.
2	6.12	5.94	6.00	6.75	7.25	Sun.	7.44	7.44	8.44	9.38	9.44	9.25
3	6.06	Sun.	Sun.	6.75	7.19	Hol.	7.50	Hol.	8.50	9.44	Sun.	9.25
4	6.06	5.94	6.06	6.75	7.18	7.69	7.50	Sun.	8.50	9.62	9.56	9.12
5	6.06	5.94	6.06	6.75	Sun.	7.75	7.44	Hol.	8.56	9.50	9.50	9.12
6	Sun.	5.94	6.06	6.75	7.12	Hol.	7.38	Hol.	8.50	Sun.	9.44	9.12
7	6.06	6.00	6.12	Sun.	7.12	Hol.	Sun.	7.56	8.56	9.50	9.50	9.12
8	6.19	6.00	6.12	6.81	7.12	Hol.	7.44	7.56	Sun.	9.44	9.44	Sun.
9	6.19	6.00	6.19	6.81	7.12	Sun.	7.50	7.56	8.69	9.56	8.81	9.19
10	6.19	Sun.	Sun.	6.88	7.25	7.81	7.50	7.56	8.69	9.69	Sun.	9.25
11	6.12	6.00	6.25	6.88	7.19	7.81	7.44	Sun.	8.75	9.69	9.19	9.31
12	6.12	6.00	6.25	Hol.	Sun.	7.75	7.44	7.81	8.62	9.56	9.12	9.25
13	Sun.	6.00	6.31	Hol.	7.19	7.75	7.38	7.81	8.56	Sun.	9.25	9.25
14	6.12	6.00	6.38	Sun.	7.19	7.62	Sun.	7.88	8.56	9.56	9.12	9.25
15	6.12	6.00	6.38	Hol.	7.25	7.56	7.38	7.88	Sun.	9.81	8.88	Sun.
16	6.12	6.00	6.50	Hol.	7.31	Sun.	7.38	7.81	8.50	9.88	8.94	9.31
17	6.12	Sun.	Sun.	7.00	7.44	7.56	7.38	7.81	8.50	9.88	Sun.	9.31
18	6.12	6.06	6.50	7.12	7.56	7.50	7.44	Sun.	8.56	9.81	9.06	9.31
19	6.06	6.06	6.50	7.12	Sun.	7.38	7.38	7.81	8.62	9.62	8.94	9.25
20	Sun.	6.06	6.69	7.25	7.62	7.44	7.38	7.81	8.75	Sun.	8.94	9.19
21	6.06	6.06	6.69	Sun.	7.56	7.38	Sun.	7.88	8.81	9.25	8.94	9.00
22	6.06	6.06	6.56	7.12	7.62	7.38	7.38	8.00	Sun.	9.25	9.12	Sun.
23	6.00	6.06	6.50	7.25	7.75	Sun.	7.38	8.12	8.88	9.25	9.12	9.00
24	6.00	Sun.	Sun.	7.38	7.69	7.38	7.31	8.19	9.00	9.19	Sun.	9.00
25	6.00	6.00	6.56	7.25	7.75	7.25	7.31	Sun.	9.19	9.25	9.31	Hol.
26	6.00	6.00	6.62	7.31	Sun.	7.25	7.38	8.19	9.31	9.25	9.31	Hol.
27	Sun.	6.00	6.62	7.31	7.75	7.31	7.38	8.19	9.38	Sun.	9.31	Hol.
28	5.94	6.00	6.62	Sun.	7.69	7.25	Sun.	8.38	9.38	9.25	9.44	Hol.
29	5.94	....	6.62	7.31	7.69	7.38	7.38	8.58	Sun.	9.44	9.38	Sun.
30	5.94	....	6.62	7.25	7.75	Sun.	7.38	8.56	9.44	9.50	9.38	9.00
31	5.94	....	Sun.	....	7.75	....	7.38	8.44	....	9.50	....	9.06
1896.												
1	Hol.	9.19	Sun.	8.81	8.81	8.12	7.88	Hol.	8.75	9.31	Sun.	8.75
2	9.19	Sun.	8.69	8.81	8.81	8.19	7.88	Sun.	9.25	9.38	9.06	8.69
3	9.25	9.19	8.69	Hol.	Sun.	8.06	8.00	Hol.	9.38	9.38	9.06	8.69
4	9.19	9.19	8.56	Hol.	8.81	7.88	8.06	Hol.	9.44	Sun.	9.25	8.56
5	Sun.	9.19	8.56	Sun.	8.88	7.88	Sun.	8.19	9.38	9.38	9.12	8.50
6	9.19	9.19	8.50	Hol.	8.94	8.00	8.00	8.38	Sun.	9.19	9.06	Sun.
7	9.19	9.12	8.62	Hol.	8.94	Sun.	8.00	8.50	9.56	9.19	9.06	8.56
8	9.12	9.12	Sun.	8.81	8.81	7.88	7.94	8.62	9.69	9.12	Sun.	8.50
9	9.19	Sun.	8.69	8.81	8.88	7.88	8.00	Sun.	9.62	9.00	9.19	8.44
10	9.19	9.12	8.81	8.81	Sun.	7.69	8.00	8.56	9.56	9.00	9.19	8.44
11	9.19	9.06	8.81	8.75	8.81	7.69	7.94	8.75	9.62	Sun.	9.19	8.31
12	Sun.	9.00	8.81	Sun.	8.81	7.81	Sun.	8.69	9.31	9.00	9.19	8.25
13	9.12	9.00	8.75	8.69	8.81	7.81	7.81	8.56	Sun.	9.06	9.19	Sun.
14	9.12	9.06	8.81	8.75	8.75	Sun.	7.69	8.81	9.38	9.06	9.06	8.12
15	9.06	9.06	Sun.	8.75	8.75	7.88	7.62	8.81	9.25	8.97	Sun.	8.12
16	9.00	Sun.	8.81	8.75	8.69	8.00	7.62	Sun.	9.50	8.88	8.94	8.06
17	9.00	8.94	8.81	8.75	Sun.	7.94	7.69	8.94	9.31	8.88	8.94	8.00
18	9.00	8.94	8.81	8.75	8.69	7.94	7.69	9.06	9.31	Sun.	8.88	8.12
19	Sun.	8.88	8·81	Sun.	8.69	7.88	Sun.	9.25	9.38	9.00	8.81	8.00
20	9.00	8.94	8.81	8.75	8.69	7.94	7.69	9.06	Sun.	8.94	8.81	Sun.
21	9.06	9.00	8.81	8.75	8.69	Sun.	7.62	9.31	9.50	8.94	8.75	8.00
22	9.12	9.00	Sun.	8.75	8.62	7.94	7.56	9.44	9.44	8.94	Sun.	7.94
23	9.12	Sun.	8.81	8.81	8.56	7.94	7.62	Sun.	9.38	8.94	8.69	8.06
24	9.19	9.00	8.75	8.81	Sun.	7.88	7.56	9.25	9.38	9.06	8.69	8.06
25	9.19	8.94	8.75	8.81	Hol.	7.75	7.56	9.12	9.38	Sun.	8.75	Hol.
26	Sun.	8.94	8.75	Sun.	8.50	7.81	Sun.	9.06	9.38	9.06	8.75	Hol.
27	9.19	8.88	8.75	8.75	8.31	7.94	7.50	8.94	Sun.	8.94	8.69	Hol.
28	9.12	8.81	8.75	8.75	Hol.	Sun.	7.50	8.94	9.44	9.06	8.81	8.06
29	9.19	8.75	Sun.	8.81	Hol.	7.88	7.62	8.75	9.44	9.06	Sun.	7.94
30	9.25	....	8.75	8.81	Hol.	7.88	7.75	Sun.	9.38	9.06	8.69	8.06
31	9.25	....	8.81	....	Sun.	....	7.81	8.56	....	9.06	....	8.00

Daily quotations of spot cotton (middling uplands) in Liverpool. (Liverpool prices reduced to American money at the rate of 2 cents to a penny.)—Continued.

Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1897.												
1	Hol.	7.88	8.06	8.00	8.50	8.25	8.31	Sun.	8.25	7.69	6.69	6.50
2	Hol.	7.88	8.00	8.00	Sun.	8.25	8.44	Hol.	8.31	7.62	6.69	6.50
3	Sun.	7.81	8.00	8.00	8.50	8.25	8.44	8.62	8.19	Sun.	6.62	6.50
4	8.06	7.94	7.94	Sun.	8.44	8.25	Sun.	8.56	8.25	7.62	6.56	6.50
5	7.94	7.94	7.81	8.06	8.44	Hol.	8.44	8.56	Sun.	7.69	5.50	Sun.
6	8.00	7.94	7.88	8.06	8.44	Sun.	8.50	8.56	8.19	7.75	6.50	6.50
7	8.00	Sun.	Sun.	8.06	8.44	Hol.	8.44	8.62	8.19	7.75	Sun.	6.50
8	8.00	7.81	7.88	8.06	8.44	8.25	8.44	Sun.	8.25	7.69	6.50	6.44
9	8.12	7.81	7.94	8.06	Sun.	8.31	8.44	8.69	8.25	7.62	6.44	6.44
10	Sun.	7.81	7.94	8.12	8.50	8.31	8.44	8.69	8.25	Sun.	6.44	6.38
11	8.12	7.69	7.94	Sun.	8.44	8.31	Sun.	8.69	8.25	7.62	6.44	6.38
12	8.00	....	7.88	8.12	8.44	8.19	8.44	8.44	Sun	7.56	6.56	Sun.
13	8.06	7.56	7.94	8.19	8.38	Sun.	8.44	8.44	8.19	7.50	6.44	6.44
14	8.06	Sun.	Sun.	8.19	8.31	8.19	8.56	8.38	8.19	7.44	Sun.	6.44
15	8.06	7.56	7.94	8.25	8.31	8.19	8.56	Sun.	8.25	7.44	6.44	6.44
16	7.94	7.69	8.00	Hol.	Sun.	8.25	8.56	8.25	8.25	7.38	6.50	6.38
17	Sun.	7.75	7.94	Hol.	8.31	8.25	8.56	8.19	8.12	Sun.	6.56	6.38
18	7.88	7.75	8.00	Sun.	8.25	8.25	Sun.	8.12	8.12	7.38	6.44	6.38
19	7.88	7.75	8.00	Hol.	8.31	....	8.50	8.25	Sun.	7.25	6.56	Sun.
20	7.94	7.81	8.00	Hol.	8.25	Sun.	8.44	8.19	8.06	7.25	6.50	6.38
21	8.00	Sun.	Sun.	8.19	8.19	....	8.50	8.19	8.00	7.19	Sun.	6.44
22	8.06	7.81	8.00	8.25	8.19	....	8.50	Sun.	8.06	7.25	6.50	6.44
23	8.00	7.88	8.00	8.25	Sun.	....	8.50	8.25	8.00	7.12	6.50	6.44
24	Sun.	7.88	8.00	8.31	8.19	....	8.50	8.50	7.94	Sun.	6.50	6.44
25	8.00	7.88	7.94	Sun.	8.19	....	Sun.	8.38	7.88	7.06	6.50	Hol.
26	8.00	8.00	7.94	8.38	8.12	8.25	8.50	8.38	Sun.	6.94	6.50	Sun.
27	8.00	8.06	7.94	8.44	8.12	Sun.	8.56	8.31	7.88	6.94	6.50	Hol.
28	8.00	Sun.	Sun.	8.50	8.12	8.19	8.50	8.31	7.75	6.94	Sun.	6.44
29	7.94	....	7.88	8.50	8.25	8.25	8.50	Sun.	7.75	6.94	6.50	6.44
30	7.88	....	7.88	8.50	Sun.	8.31	8.56	8.25	7.75	6.75	6.50	6.50
31	Sun.	....	7.94	....	8.25	....	Hol.	8.25	....	Sun.	....	6.50
1898.												
1	Hol.	6.38	6.88	6.88	Sun.	7.19	6.81	Hol.	6.62	6.12	6.00	6.25
2	Sun.	6.38	6.94	6.88	7.19	7.19	6.81	6.94	6.69	Sun.	6.00	6.25
3	Hol.	6.38	6.94	Sun.	7.12	7.12	Sun.	6.94	6.62	6.12	6.00	6.25
4	6.50	6.44	6.88	6.88	7.06	7.12	6.81	6.94	Sun.	6.12	6.00	Sun.
5	6.50	6.44	6.88	6.88	7.06	Sun.	6.88	6.94	6.56	6.19	6.00	6.25
6	6.44	Sun.	Sun.	6.88	7.12	7.12	6.88	6.94	6.56	6.25	Sun.	6.25
7	6.50	6.50	6.88	6.88	7.19	7.12	6.88	Sun.	6.56	6.25	6.00	6.25
8	6.50	6.62	6.69	Hol.	Sun.	7.12	6.88	6.94	6.56	6.19	6.00	6.25
9	Sun.	6.62	6.69	Hol.	7.19	7.12	6.88	7.00	6.56	Sun.	6.00	6.31
10	6.50	6.75	6.69	Sun.	7.19	7.12	Sun.	7.06	6.56	6.19	6.06	6.31
11	6.44	6.69	6.75	Hol.	7.12	7.12	6.88	7.06	Sun.	6.12	6.00	Sun.
12	6.44	6.75	6.75	6.88	7.12	Sun.	6.88	7.00	6.56	6.19	6.00	6.31
13	6.44	Sun.	Sun.	6.88	7.12	7.12	6.94	6.94	6.56	6.19	Sun.	6.31
14	6.44	6.75	6.69	6.88	7.12	7.12	6.94	Sun.	6.50	6.19	6.00	6.31
15	6.44	6.69	6.69	6.94	Sun.	7.12	6.94	6.88	6.44	6.19	6.06	6.31
16	Sun.	6.69	6.69	6.94	7.12	7.12	6.94	6.81	6.44	Sun.	6.06	6.25
17	6.44	6.69	6.69	Sun.	7.06	7.12	Sun.	6.81	6.44	6.19	6.06	6.25
18	6.38	6.69	6.69	7.00	7.06	7.06	6.88	6.75	Sun.	6.19	6.06	Sun.
19	6.38	6.69	6.69	7.00	7.12	Sun.	6.88	6.75	6.38	6.19	6.12	6.19
20	6.38	Sun.	Sun.	7.25	7.12	6.94	6.88	6.69	6.38	6.12	Sun.	6.19
21	6.38	6.69	6.69	7.31	7.12	6.88	6.88	Sun.	6.31	6.12	6.12	6.19
22	6.38	6.69	6.69	7.31	Sun.	6.88	6.81	6.62	6.38	6.12	6.12	6.19
23	Sun.	6.81	6.69	7.31	7.12	6.88	6.81	6.62	6.31	Sun.	6.19	6.19
24	6.38	6.88	6.62	Sun.	7.25	6.88	Sun.	6.62	6.31	6.12	6.19	Hol.
25	6.38	6.88	6.62	7.25	7.25	6.88	6.81	6.62	Sun.	6.12	6.19	Sun.
26	6.44	6.94	6.62	7.25	7.25	Sun.	6.81	6.62	6.25	6.12	6.19	Hol.
27	6.44	Sun.	Sun.	7.19	7.25	6.88	6.88	6.69	6.25	6.12	Sun.	6.19
28	6.44	6.88	6.62	7.12	Hol.	6.88	6.94	Sun.	6.25	6.12	6.31	6.19
29	6.44	....	6.75	7.19	Sun.	6.88	6.94	6.69	6.25	6.12	6.31	6.19
30	Sun.	....	6.75	7.19	Hol.	6.88	Hol.	6.62	6.25	Sun.	6.31	6.19
31	6.44	....	6.88	....	7.25	....	Sun.	6.62	....	6.06	....	Hol.
1899.												
1	Sun.	6.50	6.75	Hol.	6.75	6.81	6.62	6.75	6.94	Sun.	8.00	8.69
2	Hol.	6.56	6.81	Sun.	6.75	6.81	Sun.	6.75	6.94	7.94	8.00	8.81
3	6.19	6.56	6.81	Hol.	6.69	Hol.	6.69	6.75	Sun.	7.94	8.06	Sun.
4	6.19	6.56	6.88	6.75	6.69	Sun.	6.69	6.75	6.94	7.81	8.12	8.69
5	6.19	Sun.	Sun.	6.75	6.75	6.81	6.69	Hol.	6.94	7.94	Sun.	8.69
6	6.19	6.56	6.94	6.75	6.81	6.81	6.69	Sun.	7.00	7.94	8.25	8.56
7	6.19	6.62	6.94	6.75	Sun.	6.88	6.69	Hol.	7.06	7.81	8.31	8.62
8	Sun.	6.62	6.94	6.75	6.81	6.88	6.69	6.81	7.12	Sun.	8.44	8.69
9	6.25	6.56	6.88	Sun.	6.81	6.88	Sun.	6.88	7.06	8.00	8.44	8.56
10	6.31	6.69	6.88	6.75	6.81	6.81	6.69	6.88	Sun.	7.94	8.38	Sun.

Daily quotations of spot cotton (middling uplands) in Liverpool. (Liverpool prices reduced to American money at the rate of 2 cents to a penny.)—Continued.

Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1894.												
11	6.31	6.69	6.81	6.75	6.81	Sun.	6.69	6.94	7.12	7.81	8.12	8.62
12	6.31	Sun.	Sun.	6.75	6.81	6.81	6.62	7.19	7.06	7.88	Sun.	8.62
13	6.31	6.88	6.81	6.75	6.81	6.81	6.62	Sun.	7.06	7.75	8.19	8.69
14	6.31	6.88	6.75	6.69	Sun.	6.81	6.62	7.12	7.12	7.81	8.06	8.69
15	Sun.	6.88	6.75	6.69	6.75	6.81	6.62	7.00	7.12	Sun.	8.19	8.75
16	6.25	6.88	6.75	Sun.	6.75	6.81	Sun.	6.94	7.06	7.81	8.19	8.75
17	6.25	6.88	6.75	6.75	6.75	6.81	6.62	6.81	Sun.	7.75	8.19	Sun.
18	6.25	6.81	6.75	6.75	6.75	Sun.	6.69	6.88	7.06	7.88	8.25	8.69
19	6.19	Sun.	Sun.	6.75	6.75	6.81	6.69	6.88	7.06	8.00	Sun.	8.56
20	6.19	6.81	6.75	6.75	Hol.	6.81	6.75	Sun.	7.19	7.94	8.25	8.69
21	6.44	6.75	6.69	6.75	Sun.	6.75	6.75	6.88	7.19	7.94	8.25	8.62
22	Sun.	6.75	6.69	6.75	Hol.	6.69	6.75	7.12	7.25	Sun.	8.25	8.62
23	6.50	6.75	6.69	Sun.	6.75	6.69	Sun.	7.00	7.38	8.00	8.25	Hol.
24	6.50	6.69	6.69	6.75	6.75	6.69	6.75	7.12	Sun.	7.94	8.44	Sun.
25	6.50	6.69	6.69	6.75	6.75	Sun.	6.75	7.06	7.38	7.94	8.50	Hol.
26	6.62	Sun.	Sun.	6.75	Hol.	6.62	6.75	7.12	7.44	7.88	Sun.	......
27	6.62	6.75	6.75	6.75	Hol.	6.62	6.75	Sun.	7.50	7.94	8.56	8.81
28	6.62	6.75	6.75	6.75	Sun.	6.62	6.75	7.12	7.88	8.00	8.62	8.88
29	Sun.	....	6.81	6.75	6.75	6.62	6.75	7.12	7.69	Sun.	8.56	9.00
30	6.62	....	6.75	Sun.	6.75	6.62	Sun.	7.06	7.75	8.06	8.62	Hol.
31	6.56	....	Hol.	....	6.81	....	6.75	6.94	....	8.06	....	Sun.

5. CONCLUSIONS.

The depression in prices of agricultural products during the few years previous to 1898 has been no doubt responsible for most of the opposition to speculation in "futures." The several interests connected with the raising and marketing of these products feel that "something is wrong," and in search for the cause of the evil naturally turn against speculation as the most prominent factor in modern business life. That the condemnation of speculation is the result of misunderstanding and bitter feeling rather than intelligent research may be seen from the fact that it is quite frequently made on conflicting grounds, according to the interests involved.

Thus, to quote Dr. Emery again: "It is not so many years ago since a large and representative meeting of Western American farmers passed a resolution against options on the score that they tended to unfairly reduce the price of wheat, and it was just three weeks after that meeting that a convention of the National Association of American Millers, attended by some 500 members, was held in Minneapolis, and passed a resolution condemning options on the ground that they unfairly raised the price of wheat."[1]

At the recent Chicago conference on trusts Mr. S. H. Greeley, of the National Grain Growers' Association, accused the railroads and elevator owners who deal in "futures" of unfair methods in dealing with grain. On the one hand, he charges them with depressing prices paid to producers by means of agreement not to bid in the same territory;[2] on the other, he admits, by citing Judge Tuley, "that the warehouseman gets the grain" over the heads of other grain dealers "because he pays more for it than other bidders," an argument which is dismissed by the eminent judge with the simple statement that "no monopoly in grain dealing can operate in the long run to the interest of the producer," and that "there is no truer maxim in economics than that 'competition is the life of trade.'"[3] Mr. Greeley voices in his paper the grievances of the small grain dealer who is unable to pay as much to the producer (farmer) as the large warehouses pay, since the latter, being in league with the railroads, can afford to pay a higher price to the farmer and yet make a profit.

It is true that hundreds, or perhaps thousands, of small dealers are thereby driven out of business; but this is due to the superior facilities of large capital, just as in any other industry, and not to speculation in futures.

It is true that the monopoly, once established, may "in the long run" result in injury "to the interest of the producer," to quote Judge Tuley. But again, that will be due rather to the power of monopoly than to speculation.

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[1] Quoted from Bradstreet's, August 12, 1896, p. 542.
[2] Official Report of the Conference, published by the Civic Federation of Chicago, p. 203.
[3] Loc. cit., p. 205.

As we have attempted to show, it is a mistake to represent speculation in futures as an organized attempt to suppress prices to producers.

First. Because every short seller must become a buyer before he carries out his contract.

Second. Because, as far as spot prices are concerned, the short seller appears as a buyer and not as a seller, and therefore, against his own will, is instrumental in raising prices.

Third. Because, as far as "future" prices are concerned, the "bull" in speculative buying counteracts the effects of speculative selling of the "bear."

Fourth. Because the "bull" in his realizing operations when depressing prices, is counteracted by the opposite effect of the "covering" movements of the "bear," the two sides thus keeping the market price about where it would be kept in the long run if instead of "bulls" and "bears" there would be ordinary legitimate buyers and sellers.

Fifth. Because, as has been shown, future sales are not made at a uniformly lower price than the corresponding spot price, but on the contrary are on the average a little above spot prices to meet the cost of storage, interest, and other charges.

Sixth. Because, as has been shown, neither the "bears" nor the "bulls" are uniformly on the winning side, but are about equally losers and winners, thus proving that one is about as important and influential a factor in the market as the other.

Seventh. Because evidence believed to be conclusive has been presented showing that, under speculation, prices prevailing at the time when producers dispose of the greater part of their products are greater in comparison to the rest of the year than they were before the advent of modern speculation.

6. FURTHER ANALYSIS OF WHEAT PRICES AND SPECULATION.

A further comparison of prices may be made in a somewhat different form. We may first compare prices at different times at the same place, as for example, present (spot) and future prices at Chicago; we may, secondly, compare prices at different places such as Chicago and Liverpool. The purpose is to show that such differences in time prices are not caused by speculation, but can be adequately accounted for by the natural condition of supply and demand; and that differences in place prices can be explained just as adequately by the expenses of distribution. By time prices are of course meant prices based on difference in time at a given place; and by place prices, prices based on difference in places at the same time.

The foregoing comparisons (1) of average monthly spot and future prices of wheat at Chicago, and (2) of spot prices at Liverpool and Chicago are based on Tables 6 and 7, pages 198 and 199, respectively. In these comparisons of spot and future prices of wheat at Chicago (Table 6), the May price of July futures (column 2) is compared with July spot prices (column 3), the July price of October futures (column 4) with October spot prices (column 5), and the October price of December futures (column 6) with December spot prices (column 7). During these fifteen years (Table 6) twelve of them show that the May prices for July futures (column 2) were higher than the spot prices of wheat in July (column 3), and in but three years were the spot prices realized higher than the future prices. In other words, in four cases out of five the speculative price proved to be higher than the cash price of the wheat at the expiration of the July-October contract. This is naturally explained by the fact that the May price of spot wheat is relatively higher owing to the comparative scarcity in the last month or two before harvest, and to the tendency of future contracts to be made on the basis of that scarcity price of spot wheat. By the time the May bids for July wheat mature the conditions of the new harvest are ascertained and the new wheat supply being immediately marketed depresses the price to the point expressed in the quotations for July spots. May spots are determined by conditions of relative scarcity of supply, but July spots are determined under conditions of relative abundance of supply; the July futures, being made under the former set of conditions, approximate more nearly to the May spot quotations than to the July spot quotations, as a comparison of column 2 with 1 and 3 will show.

In the comparison of the July bids for October futures (column 4) with the October spot prices (column 5) the spot prices realized (5) were lower than the future bids (4) in nine out of fifteen cases, and higher in six out of fifteen cases. Here, as in the comparison of October bids for December futures (6) with December spot prices (7), the relations of supply and demand are reversed; by reason of the marketing of the bulk of the crop within the months between harvest and the end of the calendar year the supply is relatively abundant as compared with the demand during the same period. This system of early marketing accounts for the fact that in the majority of cases the spot prices realized on future bids are lower than the speculative bids. Such are the conditions which seem to explain sufficiently the relation between speculative bids and spot prices in the same market, showing why the cash prices realized tend as a rule to fall below the speculative bids, whether we compare Chicago prices (spot and future) or Liverpool prices.

The case is not materially different in different markets (Table 7). The spot price of wheat in Chicago and Liverpool, when compared, show for the corresponding 5 years, 1885–1889, taken for illustration, that the difference in prices averages for these years 20.83 cents per bushel. This is the average difference between the cash value of wheat at Chicago and Liverpool. Now, it is a singular coincidence that the average rates for transporting wheat from Chicago to Liverpool in these very five years was 21.06 cents, a difference or margin of less than a quarter of a cent per bushel (twenty-three one-hundredths of a cent). For 1893–1897 the difference in spot prices between Liverpool and Chicago was 18.59 cents per bushel and the published rate of transportation averaged 19.68, though actually lower.

The difference in speculative prices or future bids at different places must necessarily conform to the same general rule, that the difference between prices for the same article in two markets tends to equal the cost of transportation between them. Extreme competition among carriers may reduce the difference to less than the published cost of transportation, as appears to have been the case in 1893–1897. Another cause of difference may occur, namely, that of the formation of a "corner" in future deliveries. This would of course cause future prices to rise because of the fear of inability to fill contracts or to meet demands for the commodity. Chicago is the supply end of the wheat trade, just as Liverpool is the demand end. Any anxiety affecting the trade in general would naturally show itself more emphatically at the point of final destination than at the primary market. Hence the speculative or future price bid at Liverpool should be correspondingly higher than the constant cost of transportation plus the Chicago future price. In other words, the difference between the future price at Liverpool and at Chicago may be slightly more than the cost of transportation by reason of the fear of a scarcity or "corner" that may arise to restrict the regular flow of the supply to the consumer abroad. This difference is a risk element, which speculation charges to the consumer. The modern system of transportation can easily foretell what it will cost to get wheat to Liverpool from Chicago 3 months hence, but nobody can tell what a bushel of wheat will be valued at by that time. The speculator tries to approximate it under the law of chances or probability, and his competitors keep him from charging too much for his foresight.

The conclusion to which we are led is substantially this, that the speculative system has to consider two kinds of values in the commodities it deals with, namely, place values and time values. Place values vary by the difference, for example, between the value of a bushel of wheat at one place (Chicago) and another (Liverpool), or of a pound of cotton at one place (New Orleans) and another place (Liverpool). By time value is meant the difference between the value of a commodity (as cotton or wheat) at one time (July) and at another time (October). The difference in place value in the long run, where surplus capital is plentiful, tends to conform to the cost of carriage between the two places, cost of carriage including all elements of expense for distribution. Time values, on the other hand, differ according to the degree of correctness of the judgment of the speculative dealer whose business it is to foretell the factors and conditions that are likely to influence the course of future prices and give to each of these elements its proper weight in the formation of future prices. Inevitably the few of best foresight into future conditions are going to make the most money. Their fortune lies in foreseeing in advance of others the point at which price-making factors are going to find their focus. As President Hadley has said:

"The speculator of to-day makes his money chiefly by taking advantage of differences of price between different times rather than between different markets. It is not so much the difference in the price of wheat in Chicago and in Liverpool which furnishes the source of his profits as the difference between its price in Chicago this month and next month. If the speculator foresees a rise he buys wheat to-day with the hope of selling at an advance. If he foresees a fall he contracts to make future deliveries at to-day's prices in the hope that he can secure the means of filling those contracts at rates low enough to leave him a profit. This is the type of transaction which forms the bulk of the business on all the leading exchanges of the world."[1]

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[1] Hadley's *Economics*, Ch. iv, § 118.

PART FIFTH.

THE MARKETING OF AMERICAN LIVE STOCK.

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1. RELATIVE IMPORTANCE OF LIVE STOCK IN FARMING.

Live stock still ranks as the second important form of farm capital in the United States. In the valuation of farms and farm property the census of 1890 gives farm valuations in four main classes, as follows:

Valuation of farm property and products.

Kinds of farm property.	Value of each kind.	Percentage.
Land, fences, and buildings	$13,279,252,649	78.1
Live stock on hand June 1	2,208,767,573	19
Implements and machinery	494,247,467	2.9
Total farm valuation	15,982,267,689	100
Estimated value of products (1889)	2,460,107,454	

This comparison indicates the relative importance of live stock in farming; it also shows that the live-stock interests were almost equal in value to the entire product of the 4,500,000 farms of the year of this census.

The relative importance of the several kinds of live stock is further shown by the following percentages in each class: For every $100 invested in farm animals, taking the years 1890 to 1896 for an average, 37.4 per cent was invested in horses, 6.9 per cent in mules, 16.2 per cent in milch cows, 24.3 per cent in other cattle, 4.4 per cent in sheep, and 10.8 per cent in swine. It thus appears that nearly four-fifths of the value of farm animals is in horses and cattle and but one-fifth in mules, sheep, and swine.

In the development of the United States live stock has always been the pioneer's favorite form of farm product. It could be produced at greater distance from market than any other product. No other product could walk to market, and no other important product required so little outlay of capital and labor per unit of product as live stock. But as soon as the growth of population and of accumulations of capital in any stock-growing section increased the value of land there for tillage purposes beyond nominal rent paid for pasturage, stock-growing interests moved farther out to unoccupied lands for cheaper pasturage. How far in advance of tillage the pastoral interests kept was determined largely by the cost of getting stock to market. The distribution of this form of surplus product was simple, direct, and unchanged in form. This was the feature of distribution in the first stage of its development.

The second stage of distribution begins when the pasture lands are broken up into farms. Then the new farm economy begins, in which live stock performs an entirely different function in the rural community. To understand the commercial position of the live-stock interests to-day we have to distinguish between these two stages of production—the pastoral stage and the domestic stage, or the one in which cattle simply contribute by natural increase to the nation's food supply, and the other in which this natural increase is a subordinate feature in farm production. Here live stock, as a part of the farm organization, ceases to be the direct product and becomes an agent in the production of animal products. This change has transformed farm economy from the pastoral to the industrial order of production. More and more the American farm tends to this standard in which live stock approaches the rôle of machinery in farm equipment. Of course it is easy to see that such a change alters radically the relation of the farm to the market.

In this report 5 classes of farm animals are considered—horses and mules, cattle, hogs, and sheep. The estimated value in the United States of these classes is given approximately as $2,000,000,000.[1]

Value of farm animals by classes.

Horses	$511,000,000
Mules	96,000,000
Milch cows	474,000,000
Oxen and other cattle	638,000,000
Sheep	108,000,000
Swine	170,000,000
Total	1,997,000,000

Of these classes, the first 3 may be said to find their best market on the farm. The last 2 are much more generally produced for commercial purposes. Hence the distribution of horses, mules, and milch cows is largely a movement from one rural section to another, while the distribution of beef cattle, sheep, and swine is more generally from the farm to the slaughtering centers of the country.

In the United States these slaughtering centers are the most extensive in the world. Most of them lie within the Mississippi Valley, where pasturage and corn furnish the largest surplus of feeding and fattening supplies. The United States Bureau of Statistics estimates that at the 15 chief packing centers of the country 22,000,000 hogs were slaughtered in the year 1898-99. For 1898 the Cincinnati Chamber of Commerce puts the aggregate of eastern and western slaughterings at almost 30,000,000, as against 21,538,000 five years before. It is further estimated that the total number slaughtered at other centers and on farms would bring the number up to 40,000,000 head. If, then, it required 20 bushels of corn to fatten each hog, the total home consumption of corn for this purpose would equal 800,000,000 bushels, or about one-fourth of the entire corn crop of the country.[2]

2. THE ECONOMIC FUNCTIONS OF LIVE STOCK.

Of course the original function of live stock in agriculture is to supply the farmer with labor power and to furnish a means of subsistence to the farm household. The indirect functions of live stock are to supply manurial means of keeping up the fertility of the soil and to afford the farm a source of supply of cash capital. The excess of this supply of labor power and of subsistence seeks a market in the forms of draft animals, meat, wool, and dairy products. According as any one of these products dominates the farm economy the commercial position of the farmer will vary from time to time. Hence, to realize the relation of the live-stock trade to agriculture we must distinguish between the different economic functions that live stock performs in the American system of farming, for the market of this species of farm product constantly requires the farmer to change from one to the other use of live stock. The failure to recognize the necessity of such adjustment on the part of farmers to the market has no doubt frequently brought bankruptcy to large sections of rural industry. Frequently the system of distribution has been blamed for the failure when the fault lay in the fact that the farmer had the wrong thing to sell, or had the right thing in the wrong form, or had it in too great proportion compared with the kind of product his market wanted.

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[1] Provision Trade of the United States, U. S. Bureau of Statistics, February, 1900, p. 2283.

[2] Provision Trade of the United States, p. 2279.

The farm animal is a competitor with the foreign consumer of our surplus cereals, especially in the case of corn. This relation of live stock to cereal values is pointed out in a recent report on the provision trade of the United States by the Treasury Bureau of Statistics.

On this subject it says:

"The greater part of the United States is admirably adapted to the production of corn. The consumption of corn by human beings, however, forms but a small percentage of the whole product; and if production were stopped at the limit set by the human demand for the article at home it would be greatly restricted and much arable land would be thrown out of cultivation. Where the direct demand for corn ceases, however, that for meat commences, and the raising of live stock permits a conversion of corn into beef and pork. There is also another factor in the situation, a factor intimately associated with the problem of transportation. Cattle and hogs not only convert, but also condense corn. They enable it to be profitably raised in regions too far removed from the markets of the country to be transported in that form. By condensing the corn to one-fifth or one-sixth of its bulk and weight, and reducing the cost of transportation in something like a similar proportion, the possibilty is secured of raising corn in regions situated thousands of miles from the market at which the corn products or, what is practically the same, the pork and beef are consumed.

"The intimate connection between live stock and corn must be constantly borne in mind in order to understand the full import of the meat trade. There is no real propriety in counting both corn and swine as agricultural products, and it is statistically inadmissible to add the value of swine to the value of the corn crop in calculating the total amount of the agricultural product. Beef and pork are merely a finished product of which corn is the raw material, just as flour is a finished product of which wheat is the raw material. Pork or beef and corn are not separate products of the soil, but are the same product, the meat being in the more finished or advanced stage of production.

"It should also be borne in mind that meat is not merely an alternative product into which corn may or may not be put, but, under existing conditions, it is a product which it is absolutely necessary to produce in large quantities if our agriculture is to thrive. In view of the deep-rooted prejudice in Europe against corn, a prejudice which only gives way under the pressure of a wheat-crop failure, the exportations of a large portion of our corn crop can not be confidently anticipated, and the residue must go to the production of meat." (Summary of Commerce and Finance, February, 1900, p. 2279.)

3. AREAS OF PRODUCTION OF FARM ANIMALS.

The areas of live-stock production may be divided on the basis of these 3 or 4 classes of live-stock products. The great areas of supply of horses and mules—power animals—are the States in which pasturage is found in superior quality and abundant quantity and where other kinds of animal food (cereals) are relatively inexpensive and therefore unimportant in the cost of production. This is the case with the more mountainous States of the South, east of the Mississippi, and of the great cereal States of the interior both east and west of that river. Seventy per cent of the horses of the country are found in 16 Southern and Central States. The largest of these are Texas, Illinois, and Iowa, having each about 1,000,000 head of horses. The productive area of mules is confined somewhat more to the Southern States and the less developed agricultural States west of the Mississippi, with Texas, Missouri, Georgia, Tennessee, and Mississippi as foremost sources of supply. The meat-producing animals are mainly hogs, beef cattle, calves, and sheep. Oregon horses have even been slaughtered for the foreign meat supply as a regular business. Calves are largely a by-product of dairy-farming sections, lying nearer to city markets. But hogs are produced most economically in the corn-growing States. Seventeen States have from one to three and a half millions each, and together contain 80 per cent of the whole number of swine in the United States.[1] The largest producers of hogs are, in their order, Iowa, Missouri, Texas, Ohio, Georgia, and Illinois, each of which has over 2,000,000 head.

With cattle of various kinds the sources of supply are widely distributed. Milch cows are, of course, found in districts in which dairying is a leading feature of farming. Of the 16,000,000 head in the United States, only New York, Illinois, and Iowa have each over 1,000,000 head. Of other cattle the country has 28,000,000 head, with 6 States which have over 1,000,000 head each. In the order of their numerical importance they are Texas, with 4,500,000; Iowa and Kansas, with over 2,000,000 each, and Missouri, Illinois, and Nebraska, with between 1,000,000 and 2,000,000 head each.

The distribution of sheep has for many years tended westward in advance of tillage. When pasturage gave way to tillage on the frontier, the shepherd moved his flocks still farther westward, and when the ranges narrowed into the valleys the shepherd and the cowboy competed for the field. The cattle industry for the year 1898, as reviewed by the Cincinnati Price Current, shows that the two competitors are dividing out the country between them.[2]

The sheep industry is tending northwestward and appears to be centering in the mountain States. The cattle industry is moving southwestward for the longer pasture season and for the surplus corn.

4. THE FOUR MAIN LIVE STOCK MARKETS.

The four great receiving centers of live stock in the United States are Chicago St. Louis, Kansas City, and Omaha. The prominence of these cities as markets is due to their location within easy reach of the great productive areas and the incomparable facilities for reaching out on the one hand into the producing sections and of distributing their products on the other hand to the consuming centers of meat products. With the exception of Chicago, which is gradually yielding its primacy to the more western markets, these great packing centers are in the midst of the great stock-raising and stock-feeding States. The decentralization of Chicago is inevitable. The primary markets for beef cattle, hogs, and sheep for slaughter are bound to follow; the movement of live-stock production, for slaughtering purposes, yields to the trend of corn production. Nothing but a low freight rate from beyond the Mississippi to Chicago and the persistent tendency of the States nearest to Chicago to convert their corn into animals for slaughter can prevent the gradual decline of Chicago as a meat-packing center. The apparent recovery of more recent years is a compliment to the enterprise of Chicago as a consuming center, but the rising importance of the newer centers can not but give them the ascendancy as markets for surplus live stock very much as Minneapolis gradually wrested from Chicago the supremacy in wheat.

These three gateways between the producer of live stock and the consumer of provisions manufactured therefrom occupied a geographical position of great economical strength. The value of this adjustment of the packing industry to the sources of supply of live stock is evidenced by the rapid growth of the business of handling this species of farm product. In the last 16 years a nest of farms at Omaha has been converted into an industrial city of 15,000 inhabitants, which ranks third in the list of packing centers of the world.

At Kansas City the capacity of the slaughtering houses is almost 53,000 head of stock per day. Nearly 10,000 hands are employed in the packing industry alone. The receipts of live stock at this market in 1899 were valued at $121,000,000. As many as 21,000 cattle were received in a day and 74,000 head in a week.

The live stock at St. Louis is somewhat more general than any other of the four great markets. St. Louis stands first as a market for horses and mules. During 1899 the receipts reached 130,000 head. The standing of this market in this respect is national, as shown by the fact that last year 35 States and Territories were represented in the consignments made to St. Louis markets for horses and mules alone. The position of the St. Louis market for cattle is benefited much by the attention given to the quality of the product. "Breeders throughout the State are giving much more attention than formerly to the quality of the cattle, a fact which is a tribute to their sense and business shrewdness, and in no small degree contributes to the success of the State as a cattle producer, and is reflected at our market, resulting in a very large demand for Missouri butcher cattle for immediate use." These facts, in a general way, show the position of the different markets in the leading surplus States.[3]

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[1] Farm Bulletin, Department of Agriculture, 1898, p. 704.

[2] Issue of January 12, 1899.

[3] Trade and Commerce of St. Louis, 1899, pp. 238-240.

RECEIPTS AT FOUR PRIMARY MARKETS.[1]

Receipts of live stock at the four western markets for the past 9 years were as follows:

Year.	Kansas City.	Chicago.	Omaha.	St. Louis.
CATTLE AND CALVES.				
1899	2,017,484	2,514,600	837,563	683,992
1898	1,846,233	2,480,847	812,241	683,707
1897	1,921,962	2,677,900	810,949	787,090
1896	1,814,698	2,738,813	587,178	792,302
1895	1,689,652	2,757,298	586,103	733,526
1894	1,772,545	3,135,312	821,512	663,657
1893	1,746,828	3,343,963	852,456	756,485
1892	1,571,155	3,769,372	755,059	653,337
1891	1,347,487	3,455,742	610,002	630,356
HOGS.				
1899	2,959,073	8,176,300	2,216,482	1,800,942
1898	3,672,909	8,817,114	2,101,387	1,728,317
1897	3,350,796	8,363,724	1,610,981	1,630,773
1896	2,605,575	7,659,472	1,216,370	1,618,090
1895	2,457,697	7,885,283	1,186,726	1,084,574
1894	2,547,077	7,483,228	1,932,677	1,146,925
1893	1,948,373	6,057,278	1,406,451	777,433
1892	2,397,477	7,714,435	1,613,384	847,703
1891	2,599,109	8,600,805	1,537,387	840,927
SHEEP.				
1899	953,441	3,681,200	1,086,319	408,984
1898	980,303	3,589,439	1,085,136	435,893
1897	1,134,236	3,606,640	627,160	604,081
1896	933,126	3,590,655	358,005	591,033
1895	864,713	3,406,739	201,870	454,858
1894	589,555	3,099,725	243,945	292,223
1893	569,517	3,031,174	252,273	350,041
1892	438,268	2,145,079	188,588	298,532
1891	386,760	2,153,537	169,865	347,573

These figures indicate the growth of the three main markets west of the Mississippi and the Missouri, along the latter of which streams the newer markets are rapidly developing.

5. CHANGES IN SOURCES OF SUPPLY.

According to one authority,[2] the wool carrier is driving the beef out of Wyoming, out of Dakota, and to a large extent out of Montana, while barbed wire is rapidly narrowing individual confines and making the range a fenced country. Many large outfits have forsaken the field entirely, the past season witnessing the clearing up of a large number of large herds whose brands will pass into history. To those who have been wont to look upon the range country as the source of our beef supply, the present condition of affairs would seem at first sight to indicate alarmingly diminished beef stocks, but the shortage is much more apparent than real. The Northwestern country is not the source. It is a sort of reservoir fed from the great springs far to the south, and its supply drawn toward the market of consumption and distribution when needed. The surplus supply will come thenceforth from Texas and the South. The river has changed its course, and now empties into the corn lands of Nebraska, Kansas, and Missouri. The past 2 years have seen an enormous influx into those States of Southern cattle, and a plentitude of beef is assured for years to come.

A comparison of the sources of the supply of cattle from the several States at Omaha and Kansas City as primary markets bears out the view that the live-stock industry is being decentralized. The centers of the live-stock trade have been naturally working toward the field of most active operations, and the contest for supremacy lies betwixt Omaha and Kansas City. With the Westward movement of our national cattle capital goes the breeder as well as the feeder. In the valleys of the Mississippi and the Missouri the industry is cradled and nurtured, while the Southwest is the great propagator, and so must conditions be. There are our stocks and there is great abundance. That our markets received less cattle the past year than in 1897 has been due to the unfinished condition of much of the young stuff taken north, but another year will see supplies ample for all requirements and drawn to a very great extent from the States already mentioned. Cattle and corn are indissoluble. If we have corn we shall have cattle, and even should our corn fail us this is too great a farming country to be wholly dependent upon a single product. The cotton seed of the South, the roots of the North, and the staple farm cereals remain.

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[1] Stock Raisers' and Shippers' Handbook, Kansas City, 1900, p. 4.
[2] Cincinnati Price Current, January 12, 1899.

The main territorial sources of range cattle are therefore the Northwest and the Southwest, with the States between the Rocky Mountains and the Mississippi as stall-fed sources of supply.

For the Northwestern cattle States Omaha is the most accessible market, while Kansas City stands as the gateway of the Southwestern supply. Each of these markets has a unique location with reference to producers of live stock. Omaha is central for receiving all kinds of live stock, or the raw material, and as a distributing point for both the product of this industry and for feeders to the great corn belt of the central West. These facilities have been the secret of its rapid strides into prominence. Nebraska, Iowa, Kansas, and Missouri, the four leading corn-producing States of the West, surround this common center and find a market here for their finished stock. Omaha is at the same time the nearest great market to the ranges of Colorado, Wyoming, Utah, Nevada, the Dakotas, Montana, Oregon, and Idaho. These States furnish yearly supplies of both cattle and sheep to be either slaughtered here, if in condition, or to be fitted for the block by feeders in this corn belt.

The four great corn-feeding States, of which this point is the center, all look to this market for their supplies of feeding cattle, as well as for a market for these same cattle after being finished, and which are furnished to them for feeding purposes by the great Western and Northwestern ranges, which also furnish the killers in the fall with vast numbers of fat cattle.[1]

The conditions which surround the production of the live stock of commerce are changing both in the feed lot and on the range in all sections of the country devoted to the production, rearing, and feeding of cattle. What is meant by the range of to-day and a few years ago, says the Cincinnati Price Current, is so vastly different that it can be illustrated easily by the citation of the fact that for seasons past the proportion of cattle commonly called range cattle has been over 75 per cent, while this season 90 per cent of all the cattle has been within reach of prepared forage even on the open range. The amount of the noncommercial crops, except for live-stock feeding, is almost incomprehensible. In northwestern Oklahoma and in the Panhandle of Texas and into the very heart of the Staked Plain, the cultivation of Kaffir and milo maize is extending, while western Kansas, New Mexico, Arizona, and other sections, especially in western Oklahoma and the Texas Panhandle, are now competitive in the prefection of the beef animal with the indian-corn growers of the Missouri Valley.

It is apparent that the production of live stock for meat purposes is changing its methods. Pasturage on the ranges figures less and less and stall feeding more and more in the preparation of cattle for the market. This must favor the producer by reducing the rate of mortality among his flocks and herds. But it is still more important as indicating a new stage in productive enterprise. It is, in fact, a transition from the extensive to the intensive system of production. Even in Colorado, where pasturing is least impaired by excessive use or restricted by settlement, the special stock-feeding industry has been rapidly advancing.[2] And in California the ranges of the northern part of the State provide themselves with vast quantities of hay cut during the summer and fed until spring. Large numbers are brought in from Arizona and fed and finished for market.

As the ranges are narrowed and put to other uses, our beef will have to be produced within narrower limits. With the extension of beet-growing, ranges will be cut up, but cattle can be fed on beet pulp; with the reclamation of overflowed lands and the development of irrigation, the alfalfa area will be greatly extended, and that probably most valuable of all forage grasses will be fed on smaller farms to high-bred steers. Other conditions will combine to increase the number of cattle fed in the valleys and on small farms.[3]

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[1] Sixteenth Annual Live Stock Report, Omaha, 1899.
[2] Report of Special Agent W. G. M. Stone, Denver, Colo.
[3] Transactions, State Agricultural Society, California, p. 28, 1899.

6. ORIGIN AND DISTRIBUTION OF COMMERCIAL CATTLE.

For the Southwest, Kansas City is located with regard to the industrial tendency of the factory to follow the sources of the raw material, and thus save heavy freight expenses. The following figures show from what States this market has drawn its supply during the year 1899:

Origin of stock for 1899.[1]

State or Territory.	Cattle.	Calves.	Hogs.	Sheep.	Horses and mules.
Alabama	40				
Arkansas	4,348	91	5,254	3,486	496
Arizona	2,352	82		58,149	
Colorado	48,763	2,968	974	162,376	1,459
California				18,170	86
Georgia					100
Indiana	58	3			
Illinois	2,351	340		401	316
Iowa	17,042	3,113	165	606	392
Indian Territory	146,021	11,296	74,249	6,524	1,111
Idaho	2,005	51		29,427	451
Kentucky					13
Kansas	1,050,237	44,486	1,921,560	301,101	13,560
Louisiana	353			1,649	1
Mississippi	40			5	
Minnesota	3,272	781		20	19
Montana					294
Missouri	254,868	10,533	674,771	110,370	11,393
New York	86	81			18
Nebraska	45,558	209	143,306	28,410	1,058
New Mexico	33,792	3,543	65	59,106	600
Nevada	849			1,614	366
Oregon	116			1,218	160
Oklahoma	131,237	8,888	135,458	19,420	546
South Dakota					108
Tennessee	495	43		425	58
Texas	164,085	19,333	3,271	65,111	517
Utah	2,554	10		79,495	214
Wisconsin	665	57			
Wyoming	832	57		5,901	375
Washington					71
Canada				257	
Total	1,912,019	105,465	2,959,073	953,241	33,775

[1] Report of Kansas City Stock Yards, 1899, p. 62.

The figures below give the facts as to the distribution of the receipts of live stock at Kansas City.

Disposition of stock for 1899.[1]

State or Territory.	Cattle.	Calves.	Hogs.	Sheep.	Horses and mules.
Alabama					238
Arkansas	24				477
Arizona	163				
Colorado	1,440	1,385		4	117
California					250
Delaware					20
Florida					26
Georgia	17				908
Indiana	5,589	1		109	34
Illinois	29,086	1,507		8,518	830
Iowa	63,581	6,239		29,862	976
Indian Territory	532	89		247	157
Idaho	62				
Kentucky	51	7			25
Kansas	272,628	30,506		65,670	7,287
Louisiana	3	6			2,322
Massachusetts					4
Michigan					1
Mississippi					1,003
Minnesota	84	6		2,296	124
Montana	751	183			
Missouri	199,358	10,089		86,123	8,079
North Carolina					181

[1] Report of Kansas City Stock Yards, 1899, p. 63.

Disposition of stock for 1899—Continued.

State or Territory.	Cattle.	Calves.	Hogs.	Sheep.	Horses and mules.
Nebraska	36,292	5,020		8,335	93
New Mexico	144				72
Nevada	90				
Ohio	241				20
Oregon					22
Oklahoma	1,309	243	6	200	199
Pennsylvania					79
South Carolina					518
South Dakota	114	1			50
Tennessee	38				1,020
Texas	1,065	9		669	212
Utah	39				
Virginia					173
West Virginia					27
Wisconsin		2			88
Wyoming	866	3			248
Washington					39
Total feeders	613,567	55,296	6	202,033	25,913
Chicago	77,015	839	24,401	71,747	346
St. Louis	24,097	2,384	9,444	17,948	5,407
Export	7,880				
Other markets	224,697	6,549	217,491	45,227	1,666
Mexico	223	19	6,376	125	25
Local packing	963,877	39,961	2,700,109	616,535	
Grand total	1,911,356	105,048	2,957,827	953,615	33,357

7. MOVEMENTS WITHIN PRIMARY MARKETS.

The movement of live stock to these great consuming centers is divided into two main streams upon arrival there. This is the case, especially, with reference to Omaha and Kansas City; less so with reference to St. Louis, and still less so with regard to Chicago. The live stock which arrives at Kansas City and Omaha from raisers and shippers, passes into the mammoth stock yards; one part of which, most fit for packing purposes, is sold to the slaughtering establishments; the other portion passes out into the country for feeding and stocking purposes. Of the 2,000,000 head of cattle and calves received at Kansas City during 1899 a little over one-half of the number went direct to local packers for slaughtering. Two-thirds of the balance were returned to the country to be fed on the pasture and corn for further fattening and subsequent sale to the slaughterhouses, or for the purpose of stocking the farm with breeders or milkers. Another one-third of the million not slaughtered then and there was exported to other points. The following table shows the shipment to stockers and feeders from Kansas City for cattle and sheep for each of the two years 1898 and 1899:[1]

To—	Cattle.		Sheep.	
	1899.	1898.	1899.	1898.
Kansas	303,134	298,793	65,670	73,214
Missouri	209,447	237,583	86,123	92,025
Nebraska	41,312	24,905	8,335	8,057
Iowa	69,820	36,272	29,862	52,298
Illinois	30,593	18,098	8,518	9,678
Colorado	2,825	2,311		
Other States	11,732	16,421	3,525	272
Total	668,863	634,383	202,033	225,944

This feature of live-stock distribution shows the close connection between the pastoral industry and diversified farming in which fattening and breeding are important features in farm economy. Since 1895 the distribution of stockers and feeders for Kansas City, Omaha, and Chicago has increased 50 per cent. The volume of trade between the ranch and the dairy farm or the stock-breeding farmer has thus grown enormously within very recent years. Stock feeding is becoming a specialized industry. The ranch and the farm are two divisions of labor in the preparation of stock for the market. As the ranch loses its importance in supplying live stock direct to the slaughterhouses stock feeding plays a more important function in the production of the annual supplies for the packing market.

The following table shows to what extent these three great markets have contributed to the distribution of cattle between ranch and farm from Kansas City, Omaha, and Chicago as centers whose admirable facilities for transportation give ready access to the farm territory around:

Stockers and feeders shipped from principal markets for a series of years.[1]

From—	1889.	1898.	1897.	1896.	1895.
Kansas City	668,863	634,000	665,631	510,443	392,262
Omaha	308,000	261,700	330,000	196,000	133,500
Chicago	275,000	175,000	225,000	150,000	175,000
Total	1,251,863	1,070,700	1,220,631	856,433	800,762

[1] Report of Kansas City Stock Yards, 1899.

The greater portion of the distribution of lean range cattle for feeders, and of calves and heifers for stockers, is done within the 4 months immediately following the cereal harvests. In September, 1899, Kansas City sent over 126,000 head to the country, and in October 120,000 more, out of the total of 670,000 (in round numbers) for the year. The weekly distribution given below for the four leading markets within the 21 weeks of these months shows how heavy the movement is and the proportion which each market has in the distribution.

Weekly distribution of stockers and feeders.

[From the Kansas City Drovers' Telegram, January 1, 1900.]

Considerably over half of the year's business was transacted in the months of August, September, October, and November, and these figures, which represent the business done at the four leading stocker and feeder markets of this section of country, show about the same per cent as would a comparison for the whole year. Leaving off, however, the last week in December, which is necessarily very light, the total shipments from these four markets in 21 weeks were as follows, all shipments being official excepting Chicago:

Week ending—	Kansas City.	Chicago.	Omaha.	St. Louis.	Total.
August 5	10,233	3,000	2,500	1,800	17,533
August 12	12,138	4,000	5,400	2,000	23,538
August 19	21,911	4,800	6,300	3,500	36,541
August 26	20,646	10,000	10,500	4,300	45,446
September 2	21,351	7,000	11,000	4,500	43,851
September 9	23,317	5,800	10,416	4,235	43,768
September 16	30,688	8,400	14,449	2,832	56,369
September 23	30,038	10,000	18,947	4,579	60,834
September 30	37,359	10,000	15,464	4,276	67,099
October 7	30,268	12,000	18,852	4,495	65,615
October 14	38,150	10,000	15,391	3,473	67,014
October 21	22,758	7,000	16,908	3,706	50,372
October 28	25,149	8,000	13,512	2,738	49,399
November 4	23,704	7,000	9,436	2,737	42,877
November 11	19,865	6,000	8,997	3,275	38,137
November 18	23,821	6,000	11,224	3,385	44,430
November 25	18,518	5,000	9,171	3,199	35,888
December 2	14,136	5,000	6,534	2,119	27,789
December 9	18,333	4,000	7,408	2,326	32,047
December 16	11,421	3,500	6,613	2,958	27,492
December 23	14,145	3,500	5,186	1,956	24,787
Total	470,979	140,000	223,700	68,389	903,048
Per cent of total	52.1	15.5	24.8	7.6	100

The progress of this part of the live-stock trade is apparent from the next table. The number of carloads sent to the country, from Kansas City alone, has doubled since 1893.

Yearly distribution in carloads.

[From the Drovers' Telegram, January 1, 1900.]

	1899.	1898.	1897.	1896.	1895.	1894.	1893.
January	895	1,191	1,635	820	795	846	483
February	951	1,201	1,427	935	481	897	510
March	1,109	1,345	1,192	719	1,001	962	420
April	751	573	838	546	527	391	250
May	665	585	821	483	321	242	275
June	416	475	629	354	383	169	151
July	537	511	841	568	819	243	231
August	2,515	1,769	2,767	1,416	1,945	830	568
September	3,828	3,503	2,996	2,850	1,630	998	1,267
October	3,480	3,641	2,666	2,629	1,903	1,792	1,716
November	2,671	2,458	2,806	2,332	1,518	1,644	1,450
December	1,572	1,365	1,640	2,517	1,214	1,058	1,218
Year	19,393	18,617	20,255	16,169	12,537	10,072	8,536

8. TERRITORIAL DESTINATION OF STOCKERS AND FEEDERS.

An analysis of the table of destination of these classes of live stock reveals the wide geographical scope of the movement. From Kansas City, 26 States and Territories received cattle and sheep in 1899. Most of them, however, went to the feeding stables of five States—Kansas, Missouri, Nebraska, Iowa, and Illinois—and in carload lots.

Destination by head of stockers and feeders (cattle and calves combined), and sheep in 1899 and 1898.

	Cattle.		Sheep.	
	1899.	1898.	1899.	1898.
Arkansas	24	290	....	70
Arizona	163	123	....	....
Colorado	2,825	2,311	4	3
California	....	17	....	....
Georgia	17	251	....	....
Indiana	5,590	2,921	109	....
Illinois	30,593	18,089	8,518	9,678
Iowa	69,820	36,272	29,862	52,298
Indian Territory	621	1,518	247	342
Idaho	62	....	....	....
Kentucky	58	27	....	....
Kansas	303,134	298,793	65,670	73,214
Louisiana	9	12	....	....
Minnesota	90	321	2,296	....
Montana	934	207	....	....
Missouri	209,447	237,583	86,123	92,025
Nebraska	41,312	24,905	8,335	8,057
New Mexico	144	287	....	....
Nevada	90	471	....	35
North Dakota	....	125	....	....
Ohio	241	250	....	....
Oklahoma	1,552	4,929	200	222
South Dakota	115	1,584	....	....
Tennessee	38	98	....	....
Texas	1,074	2,145	669	....
Utah	39	....	....	....
Virginia	....	12	....	....
Wisconsin	2	256	....	....
Wyoming	869	166	....	....

Shipments by carloads to various States in the past 2 years.

	1899.	1898.	Gain.	Loss.
Kansas	8,317	8,033	284	....
Missouri	5,750	6,881	....	1,131
Nebraska	1,303	866	437	....
Iowa	2,217	1,232	985	....
Illinois	1,254	835	419	....
Other States	552	770	....	218
Total	19,393	18,617	776	....

The extent to which stock received has been consumed and distributed at Omaha, Kansas City, and Chicago is measured by the figures given for 1899.

Stock receipts and shipments at Omaha, 1899.[1]

	Cattle.	Hogs.	Sheep.	Horses and mules.	Carloads.
Receipts	837,563	2,216,482	2,086,319	34,255	68,770
Shipments	288,474	25,999	342,247	30,191	12,545
Consumed and on hand	549,089	2,190,483	1,744,072	4,064	56,225

[1] Sixteenth Annual Report of Union Stock Yards Company, Omaha, Nebr., 1899.

Stock receipts and shipments at Kansas City, 1899.[1]

	Cattle.	Hogs.	Sheep.	Horses and mules.	Carloads.
Receipts	1,984,846	2,919,332	915,190	22,995	116,479
Shipments	984,471	257,718	308,403	20,500	38,905
Consumed and on hand	1,000,375	2,661,614	606,787	2,495	77,574

[1] Twenty-ninth Annual Report of Receipts and Shipments of Live Stock at Kansas City Stock Yards, December 31, 1899.

Receipts and shipments at Chicago, 1899.[1]

	Cattle.	Hogs.	Sheep.
Receipts	2,514,446	8,177,870	3,682,832
Shipments	811,874	1,689,439	386,991
Consumed and on hand	1,702,572	6,488,431	3,295,841

[1] Forty-second Annual Report, Trade and Commerce of Chicago, 1899.

9. THE EASTWARD MOVEMENT OF LIVE STOCK.

The position of Buffalo, the eastern head of lake navigation for the distribution of Western products, gives this point special prominence in the live-stock trade. Though not so important as a consuming center, much of the stock required for New England and Middle States consumption goes by this Eastern gateway. At this point competition with Canadian supplies enters the United States, especially in sheep. Through Buffalo the export supply comes very largely for the ports of Boston and New York. The movement is therefore noteworthy from the standpoint of foreign as well as domestic commerce.

The total receipts and shipments for a series of 10 years in carload lots is given below:

The live-stock trade at Buffalo.[1]

Year.	Received.				Shipped.			
	Cattle, cars.	Hogs, cars.	Sheep, cars.	Horses, cars.	Cattle, cars.	Hogs, cars.	Sheep, cars.	Horses, cars.
1899	24,224	30,359	6,448	3,545	21,874	24,734	6,634	2,847
1898[2]	28,200	30,709	6,606	3,964	26,535	25,555	7,029	3,679
1897[2]	31,194	28,169	7,760	4,964	28,791	24,384	7,212	4,738
1896	42,967	26,003	13,321	4,615	38,422	17,112	9,445	4,244
1895	36,175	27,664	16,114	4,831	32,935	17,684	10,909	4,262
1894	42,167	29,613	14,383	3,969	38,253	24,887	11,038	3,807
1893	41,957	31,885	12,891	3,616	38,114	12,471	9,558	3,370
1892	49,799	32,169	12,915	3,575	46,636	27,559	9,621	3,531
1891	49,053	37,719	12,254	3,700	45,533	27,602	10,504	3,407
1890	55,849	32,962	12,165	3,966	48,811	20,070	7,955	3,476
1889	47,271	30,512	12,174	3,107	44,923	20,840	9,517	2,902

[1] Buffalo Merchants' Exchange, 1898, pp. 114-115.

[2] Plus 4,475 cars of mixed stock in 1897 and 3,233 in 1898 received, and plus 504 cars of mixed stock in 1897 and 478 cars in 1898 shipped.

The live-stock movement eastward from Buffalo is wholly by rail. The receipts at the New York Central stock yards are divided into sale stock—stock offered for sale at this market—and through stock, or stock destined for Eastern marketing or for export. On this basis it is evident from the following table that the cattle shipments are largely through stock shipments; the hog shipments are mainly of through cars, and the sheep shipments still more largely for local account.

Destination of receipts at New York Central yards, Buffalo.[1]

	Sale (stock cars).			Through (stock cars).		
	Cattle.	Hogs.	Sheep.	Cattle.	Hogs.	Sheep.
1899	9,138	11,748	7,732	16,034	1,145	716
1898	9,098	13,947	7,249	13,491	1,063	1,175
1897	9,243	12,997	8,126	24,384	15,951	1,414
1896	8,247	13,094	9,848	34,700	12,909	3,473
1895	9,891	12,807	11,487	26,284	14,857	4,627
1894	9,704	10,733	10,628	32,463	18,880	3,755
1893	9,639	8,570	8,460	22,318	23,315	4,431
1892	10,983	9,918	8,975	38,816	22,251	3,940
1891	11,169	10,808	6,509	37,884	26,911	5,745
1890	11,907	12,510	6,205	21,848	4,758	2,489
1889	11,894	12,804	6,785	26,659	6,944	2.496
1888	11,991	9,002	6,780	18,732	6,467	2,335
1887	10,922	8,771	6,687	....	....	....

[1] Buffalo Merchants' Exchange, 1898, p. 116; 1899, p. 127.

10. SEABOARD RECEIPTS OF CATTLE, SHEEP, HOGS, AND CALVES.

The receipts of the four leading kinds of live stock at New York, Boston, Philadelphia, and Baltimore for a series of years show that this movement of cattle has been stationary for the past 10 years, that the shipments of sheep have about held their own for the past 16 years, that the live-hog receipts have increased about 70 per cent since 1882, and that calves have increased 78 per cent over 1882. Taking all live-stock receipts at these seaports into account, they advanced as a whole from 7,393,229 in 1882 to their highest figure, 10,064,690, in 1891, and declined to less than 9,000,000 (8,787,111) in 1898.

Receipts of live stock at undermentioned seaboard cities for the years 1893 to 1898, inclusive.[1]

	Cattle.	Sheep.	Hogs.	Veals.	Total.
1893.	*Number.*	*Number.*	*Number.*	*Number.*	*Number.*
New York	518,363	2,054,826	1,487,827	307,877	4,368,893
Boston	151,188	530,064	1,150,685	80,315	1,912,252
Philadelphia	151,744	458,576	275,185	1,633	890,138
Baltimore	137,131	248,130	526,030	18,269	929,563
Total	961,429	3,291,596	3,439,727	408,094	8,100,846
1894.					
New York	575,578	2,436,742	1,656,434	232,788	4,951,537
Boston	182,276	688,334	1,664,671	73,996	2,609,277
Philadelphia	151,960	551,985	288,671	35,887	1,028,503
Baltimore	154,958	361,722	602,996	18,016	1,137,692
Total	1,064,772	4,083,783	4,212,772	410,682	9,727,009
1895.					
New York	570,428	2,374,583	1,762,857	304,845	5,012,713
Boston	170,062	789,893	1,397,302	74,457	2,431,214
Philadelphia	132,260	577,151	259,129	37,285	1,005.825
Baltimore	130,340	483,459	714,965	21,580	1,350,344
Total	1,003,090	4,224,586	4,134,253	438,167	9,800,096
1896.					
New York	575,600	2,045,621	1,844,697	325,547	4,791,465
Boston	225,262	666,528	1,421,513	82,477	2,395,780
Philadelphia	121,475	468,618	278,497	43,596	912,186
Baltimore	148,482	393,638	804,797	15,438	1,362,355
Total	1,070,819	3,574,405	4,349,504	467,058	9,461,786

[1] Report of New York Produce Exchange, 1898-99, p. 123.

Receipts of live stock at undermentioned seaboard cities for the years 1893 to 1898, inclusive—Continued.

	Cattle.	Sheep.	Hogs.	Veals.	Total.
1897.					
New York	547,906	1,794,934	1,700,226	322,094	4,365,160
Boston	229,172	559,015	1,421,261	92,203	2,301,651
Philadelphia	114,770	385,523	248,219	....	748,512
Baltimore	161,078	387,019	823,061	14,331	1,385,489
Total	1,052,926	3,126,491	4,192,767	428,628	8,800,812
1898.					
New York	559,203	1,762,373	1,797,099	318,722	4,437,397
Boston	192,853	493,508	1,494,689	79,619	2,260,669
Philadelphia	111,009	338,518	240,314	....	689,841
Baltimore	156,898	371,640	857,891	12,775	1,399,204
Total	1,019,963	2,966,039	4,389,993	411,116	8,787,111
1899.					
New York	586,283	1,883,081	1,735,215	367,179	4,573,758
Boston	188,539	379,615	1,680,834	91,769	2,340,757
Philadelphia	113,810	341,452	245,197	No record	700,459
Baltimore	157,542	324,371	827,873	11,751	1,321,537
Total	1,048,174	2,928,519	4,489,119	470,699	8,936,511

TOTAL.

1899	1,048,174	2,928,519	4,489,119	470,699	8,936,511
1898	1,019,963	2,966,039	4,389,993	411,116	8,787,111
1897	1,052,926	3,126,491	4,192,767	428,628	8,800,812
1896	1,070,819	3,574,405	4,319,504	467,058	9,461,786
1895	1,003,090	4,224,586	4,134,253	438,167	9,800,096
1894	1,064,772	4,038,783	4,212,772	410,682	9,727,009
1893	961,429	3,291,596	3,439,727	408,091	8,100,846
1892	1,167,712	3,367,264	4,628,857	430,967	9,591,800
1891	1,163,573	3,384,421	5,056,556	460,140	10,064,690
1890	1,240,218	3,274,327	4,659,880	457,608	9,632,033
1889	1,162,240	3,305,647	4,009,327	398,530	8,875,744
1888	944,696	3,454,775	3,572,342	308,665	8,280,478
1887	796,495	3,432,327	3,665,403	359,737	8,253,962
1886	899,168	3,325,064	3,568,935	349,617	8,142,784
1885	960,956	3,274,409	3,301,232	310,095	7,856,692
1884	1,011,529	3,570,597	3,076,759	240,268	7,899,153
1883	1,166,193	3,563,285	3,012,460	230,039	7,971,977
1882	1,015,657	3,509,351	2,638,994	229,227	7,393,229

The noteworthy feature in comparing these points is the development of the receipts of hogs at Boston. New York ranks fourth in receipts of live hogs, being outranked only by Chicago, Kansas City, and Omaha. The latest figures give 1,737,000 hogs packed and marketed at Boston.[1] In all these particular kinds of stock, New York is the foremost receiving port for local slaughtering and for export purposes. In total receipts of all kinds New York's receipts are practically equal to all receipts at the three other ports; that is, New York controls about half of the entire seaboard receipts at these four ports.

11. EAST-BOUND RATES ON LIVE STOCK.

Chicago is the standard point of distribution for live stock for eastern points for consumption or export. Most of the shipping rates from other points farther west or south are made on the Chicago-New York rate as a basis. This is so practically from all points on the Missouri and the Ohio rivers. The St. Louis-New York rate is usually 5 cents higher than the Chicago-New York rate. The rate from each of these cities is usually higher to cities north of New York and lower to cities south of New York.

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[1] World Almanac, 1900, p. 192.

The rates on four classes of live stock in 1892 and June, 1900, stood as follows on east-bound traffic from Chicago, Ill., in cents per 100 pounds:[1]

Classes.	To Boston.	To Philadelphia.	To Baltimore.	To New York.
Cattle:				
1892	28	26	25	28
1900	28	26	25	28
Hogs:				
1892	30	28	27	30
1900	30	28	27	30
Sheep:				
1892	30	28	27	30
1900	30	28	27	30
Horses and mules:				
1892	60	58	57	60
1900	60	58	57	60

The published rates of 1892, compared with the published rates in force to-day (June, 1900), between Chicago and the seaboard cities on the Atlantic, as furnished by the Interstate Commerce Commission, show not a single item of change either by way of increase or decrease.

12. SIX YEARS' EXPORTS, 1894-1899.

Agricultural products rank first among our shipments to foreign ports. Live stock takes prominent rank among other exports; especially is this the case with horses, mules, and beef cattle. Other species, such as hogs, are sent abroad as provisions. The relative rank of these several kinds in value and numbers exported for a series of years shows the trend of the foreign live-stock trade.

Exports of live stock, 1894-1899.[1]

Year.	Cattle.		Hogs.		Horses.		Mules.		Sheep.	
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
1894	359,278	$33,461,922	1,553	$14,753	5,246	$1,108,995	2,063	$240,961	132,370	$832,763
1895	331,772	30,603,796	7,130	72,424	13,984	2,209,298	2,515	186,453	405,748	2,630,686
1896	372,161	34,560,672	21,049	227,297	25,126	3,530,703	5,918	406,161	491,565	3,076,384
1897	392,190	36,357,451	28,751	295,998	39,532	4,769,265	7,473	545,331	244,120	1,531,645
1898	439,255	37,827,500	14,579	110,487	51,150	6,176,569	8,098	664,789	199,690	1,213,886
Annual average, 1894-98	378,981	34,562,268	14,612	114,192	27,008	3,558,966	5,213	408,739	294,699	1,857,072
1899	398,490	30,516,833	33,031	227,241	45,778	5,444,342	6,755	516,908	143,286	853,555

[1] Distribution of Agricultural Exports, Bulletin No. 16, U. S. Dept. of Agriculture for 1894-1898. For 1899, from June (1899) Summary.

13. EXPENSES OF EXPORTING CATTLE.

There are, it is estimated, about 28,000,000 beef cattle in the United States (1899). Mexico sends annually to the United States from 75,000 (1899) to nearly 300,000 head (1897). The total imports of cattle for 1899 were 199,128 head. Cattle are not admitted duty free, and this, of course, affects the price to the home producer a relatively small number being imported. Our four leading slaughtering cities took over 6,000,000 head in 1899. Our exports of cattle, for 1899, were nearly 400,000 (398,490). For export purposes the best grade of stock is selected. The risks of the ocean voyage are now inconsiderable. The business is largely in the hands of a few firms extensively engaged in the slaughtering industry in the West and Eastern seaports. The trade of the United States dealers, however, is being encroached upon by South America and by Australia. These countries, with their shipments of live cattle and frozen beef, have entered the field extensively only in the last few years, but they have already captured a good share of Europe's meat business. As a general thing, however, American cattle are regarded as of better quality than those of her competitors, though the Argentine Republic and Australia grow some very good cattle, and are rapidly adopting every modern method for the safe and speedy handling of their shipments.

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[1] Aldrich Report, p. 525, for rates of 1892, and Interstate Commerce Commission for rates of 1900.

The principal cattle-exporting point on the Atlantic Ocean is Boston, though New York is not far behind. Montreal also does a big business. Philadelphia, Baltimore, Norfolk, and Portland are among the principal ports from which cattle are exported.

The largest market abroad for our cattle, of course, is England, and most of the cattle-carrying steamers land at Liverpool. Cattle destined for Scotland are landed at Glasgow. The English laws provide that imported cattle from America must be slaughtered within ten days after arrival. This is done in order to prevent the spread of any disease or contagion that may affect the imported animals.

The profits of the business vary, naturally, according to the market conditions and the shrewdness and financial ability of the operator. Competition has grown rapidly in the last few years, not only with exporters in South America and Australia, but in our own country as well. There are three or four times as many, or maybe more, engaged in the exporting business now as there were 10 years ago. The increased competition, of course, lowers the individual profits. Many of the exporters this year have made money, and many others have lost money.

Vessels expressly designed for ocean carriage of cattle are in use. The cattle are delivered at seaboard by rail, driven into yards, and after a suitable time for recovery from the long rail shipment, are transferred to the cattle steamer. In 10 days the average cattle steamer reaches Liverpool, for example, where the slaughtering takes place, and the meat is marketed in competition with home-raised cattle. So keen has foreign competition in beef supplies been, in England especially, that it is said that raising beef cattle for the home market is rapidly becoming extinct as a feature of English agriculture.

The following figures of cost of exportation to England hold good to-day. As the largest proportion of live cattle exported goes to that market, this estimate will serve to measure the expenses of shipping cattle from Chicago to Europe generally.

"The cattle exported alive to Great Britain are for the most part 3 and 4 year olds, selected from the highest class of beeves raised in the cattle States west of the Mississippi and marketed in Chicago. They are there bought by the great slaughtering and packing houses, among which may be mentioned Messrs, Armour, Swift & Co., and Messrs. Nelson Morris & Co. The cattle are shipped almost entirely to London, Liverpool, or Glasgow, where their meat sells slightly below the corresponding class of English beef, from the force of a lingering prejudice against the foreign article. The total of the exporters' expenses between the Chicago and the English market varies from $20 to $25 per head, according to the rates of ocean freight. The items of expenses are—

Railroad freight from Chicago to New York	$7.00
Feed on ocean	3.00
Ocean freight (about)	9.00
Insurance	.85
Attendance	1.00
Yardage, commission, etc., on English side	3.00
Incidental	1.00
Total	24.85

"It is calculated, making due allowance for loss of weight on the voyage, that a difference of some 6 or 7 cents (3d. to 3½d.) per pound between the Chicago and English prices (live weight and estimated dressed weight, respectively) is just sufficient to enable the exporter to recover his outlay with a fair profit, supposing the shipment to be of heavy cattle; and the prices in the two markets tend, in the long run, to adjust themselves in this relation. A difference in price of more than 7 cents has an immediate effect in stimulating purchases for export at Chicago; a very slight advance of prices at Chicago or decline at Liverpool, bringing the difference in price below 6 cents, is sufficient to make exportation a losing business. The exporter, having generally been forced to engage ocean freight some months in advance, has then to choose between sacrificing his freight or shipping at a certain loss. Thus the business has admittedly been one of great uncertainty and risk."[1]

On this basis, a native beef steer weighing 1,500 pounds is shipped from Ames, Nebr., to Chicago at a rate of 15 cents per 100 pounds. The price paid the producer was $5 per 100 pounds at the shipping point, or $75. We may allow $1 to cover transfer, feeding, and yardage.

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[1] Final report, Royal Commission on Agricultural Depression.

Items of expense in exporting a 1,500-pound steer.

Expense from Ames, Nebr., to Chicago, f. o. b., freight, yardage, feed, transfer, etc.	$3.25
Expense from Chicago to Liverpool	24.85
1. Total expenses, Ames to Liverpool	28.10
2. Price paid producer	75.00
Gross cost to foreign consumer	103.10

Apportioned between producer and distributer, the share of each would be as follows:

	Per cent.
Consumer pays	100
Distributers receive	27
Producer receives	73

14. THE LIVE-STOCK TRADE OF ST. LOUIS.

"The live-stock market of St. Louis," says Mr. James Maccallum, editor of the Union Stock Yards Journal, "shows, as each year passes, a steady increase, and has shared to a large extent the prosperity which proves general throughout the country. The year just passed has proved that the St. Louis market is a factor in the great marts of the world. It used to be that all prices were dominated by Chicago. That has changed, and we may say that the hog and horse and mule markets, at least, of St. Louis are followed more closely by both buyers and shippers than any other markets. The prices paid here are uniformly stronger and higher than at any other point. The demand for live stock has at all times kept well ahead of the supply, and seldom indeed during the past year has the daily market shown left-overs. In fact, it may be truthfully said that the great packing houses and the butchers of St. Louis could take care of many more cattle, hogs, and sheep than come here consigned to first hands. This is taken advantage of by speculators at other markets, who buy on their local market and ship in consignments of live stock, and they presumably make money by so doing. The country shipper should discern this and save for himself the profits."

The requirements of local consumption at this market are arrived at by comparing the receipts with the shipments of each kind of stock.

Receipts and shipments of cattle, sheep, hogs, horses, and mules for thirty-two years at St. Louis.[1]

Year.	Receipts.				Shipments.			
	Cattle.	Sheep.	Hogs.	Horses and mules.	Cattle.	Sheep.	Hogs.	Horses and mules.
1899	766,032	432,566	2,147,144	130,236	224,177	97,722	578,067	103,772
1898	795,611	477,091	2,136,328	128,542	251,619	127,184	573,951	117,603
1897	960,763	660,380	2,065,283	105,570	367,664	212,759	838,319	97,548
1896	955,613	632,872	1,997,895	121,722	350,037	251,602	885,462	121,202
1895	851,275	510,660	1,440,342	77,820	274,738	119,768	605,319	81,926
1894	773,571	359,896	1,489,856	59,822	281,260	90,526	642,699	67,564
1893	903,257	397,725	1,105,108	46,834	473,966	231,176	575,846	55,931
1892	801,111	376,922	1,310,311	45,759	465,328	248,035	715,969	49,077
1891	779,499	402,989	1,380,569	55,975	464,794	277,886	704,378	66,891
1890	639,014	358,496	1,359,789	82,071	361,705	251,728	665,471	79,030
1889	508,190	358,495	1,120,930	78,104	297,879	255,375	420,310	65,399
1888	546,875	456,669	929,230	58,458	336,206	316,676	291,869	61,192
1887	464,828	417,425	1,052,240	57,048	277,406	287,018	324,735	59,222
1886	377,550	328,985	1,264,471	42,032	212,958	202,728	520,362	39,798
1885	386,320	362,858	1,455,535	39,385	233,249	233,391	789,487	35,610
1884	450,717	380,822	1,474,475	41,870	315,433	248,545	678,874	39,541
1883	405,090	398,612	1,151,785	44,913	249,523	217,370	609,388	41,513
1882	443,169	443,120	846,228	42,718	188,486	245,071	264,584	46,255
1881	503,862	334,426	1,672,153	42,365	293,092	170,395	889,909	43,794
1880	424,720	205,969	1,840,684	46,011	228,879	93,522	770,769	44,116
1879	420,654	182,648	1,762,724	33,289	226,255	88,083	686,099	36,917
1878	406,235	168,095	1,451,634	27,878	261,723	74,433	528,627	30,867
1877	411,969	200,502	896,319	22,652	251,566	87,569	314,287	25,157
1876	319,043	157,831	877,160	22,271	220,430	67,886	232,876	26,301
1875	335,742	125,679	628,569	27,516	216,701	37,784	126,729	28,675
1874	360,925	114,913	1,126,586	27,175	226,678	35,577	453,710	30,202
1873	279,678	86,434	973,512	....	180,662	18,902	224,873	....
1872	263,404	115,904	759,076	....	164,870	29,540	188,700	....
1871	199,527	118,899	633,370	....	130,018	37,465	113,913	....
1870	201,422	94,477	310,850	....	129,748	11,649	17,156	....
1869	124,565	96,626	341,848	....	59,867	12,416	39,076	....
1868	115,352	79,315	301,560	....	37,277	6,415	16,277	....

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[1] Trade and Commerce of St. Louis, 1899.

15. COST OF MARKETING HORSES AND MULES AT ST. LOUIS

St. Louis stands first as a market for horses and mules. During 1899 the receipts reached 130,236 head, and for the coming year bid fair to largely exceed that number. Heavy purchases of mules were made during the year for South Africa and Cuba, and the demand continues. One feature of the trade is the supply of high-class coach and light harness horses, for which there was a good demand, and which drew buyers from all parts of the country. As an evidence of the standing of St. Louis as a market, it may be stated that consignments were made to this market from 35 States and Territories.

As a basis of the following estimates draft horses have been taken, because that class called "chunks" forms the bulk of the sales at this market. The lower price has been used as the basis, though in April, 1900, this class of horses sold as high as $140 per head. Yet $100 per head is nearer the standard price at which this stock sold. Common drivers sold from $100 to $125 per head, but these finer grades are shipped in many cases alone in a car, and at less than carload rate, and may be in the stable a month before sold.

Itemized expenses of marketing horses at St. Louis.[1]

Year and month of sale.	Kind and grade of product.	Consumer paid per head.	Producer received per head.	Combined expenses of distribution per head between producer and consumer.	Percentage of consumers' price to—		From St. Louis.
					Distributers.	Producers.	
					Per ct.	*Per ct.*	*Miles.*
1899 (November).	Horses, chunks; weight, 1,200 to 1,400 pounds.	$75.00	$69.34	Commission, $2; yardage, 25 cents; one feed, 50 cents; $35 per car freight from Richland, Mo. (12 head per car); total, $5.66.	8	92	160
1900 (April)	Horses, chunks; weight, 1,200 to 1,450 pounds.	100.00	91.42	Commission, $2; yardage, 25 cents; one feed, 50 cents; $70 per car freight from Wichita, Kans. (12 head per car); total, $8.58.	9	91	518
1899 (November).	Horses, chunks; weight, 1,200 to 1,400 pounds.	75.00	67.00	Commission, $2; yardage, 25 cents; one feed, 50 cents; $63 per car freight from Topeka, Kans. (12 head per car); total, $8.	11	89	344
1900 (April)	Horses, chunks; weight, 1,200 to 1,450 pounds.	100.00	92.83	Commission, $2; yardage, 25 cents; one feed, 50 cents; $53 per car freight from Independence, Mo. (12 head per car); total, $7.17.	7	93	273

[1] Reported by Mr. E. S. Tompkins, special agent, St. Louis, Mo.

It should be noted that the price, especially for the larger mules, was higher in April than in November, which is mainly the result of heavy sales during the previous months. The price was then on the increase, the supply not being equal to the demand.

Mules are very largely marketed through this point for the Southeastern States for plantation use in cotton growing. The movement to and from St. Louis is given in the following table, by routes and modes of transportation, for the year 1899:

Receipts and shipments of horses and mules (head), 1899.

RECEIPTS.

By railroad, river, etc.:	
Chicago and Alton R. R., Missouri division	4,768
Missouri Pacific R. R	8,974
St. Louis and San Francisco R. R	10,157
Wabash R. R. (west)	20,945
St. Louis, Kansas City and Colorado R. R	52
Missouri, Kansas and Texas R. R	5,646

By railroad, river, etc.—Continued.	
St. Louis, Iron Mountain and Southern R. R	2,119
Illinois Central R. R	2,461
Louisville, Henderson and St. Louis R. R	159
Louisville and Nashville R. R	2,996
Mobile and Ohio R. R	712
Louisville, Evansville and St. Louis R. R	696
Baltimore and Ohio Southwestern R. R	1,898
Chicago and Alton R. R	4,851
Cleveland, Cincinnati, Chicago and St. Louis R. R	1,977
Vandalia and Terre Haute R. R	2,026
Wabash R. R. (east)	1,684
Toledo, St. Louis and Kansas City R. R	402
Chicago, Peoria and St. Louis R. R	513
Chicago, Burlington and Quincy R. R	5,363
St. Louis, Keokuk and Northwestern R. R	34,008
St. Louis, Chicago and St. Paul R. R	279
St. Louis, Peoria and Northern R. R	456
Upper Mississippi River	1,526
Lower Mississippi River	612
Illinois River	200
Ohio, Cumberland, and Tennessee rivers	5
Driven	14,751
Total	130,236

SHIPMENTS.

By railroad and river:	
Chicago and Alton R. R., Missouri division	164
Missouri Pacific R. R	1,138
St. Louis and San Francisco R. R	1,700
Wabash R. R. (west)	568
Missouri, Kansas and Texas R. R	322
St. Louis Southwestern Rwy	40
St. Louis, Iron Mountain and Southern R. R	6,079
Louisville, Henderson and St. Louis R. R	8
Illinois Central R. R	16,231
Louisville and Nashville R. R	19,697
Mobile and Ohio R. R	12,671
Louisville, Evansville and St. Louis R. R	1,281
Baltimore and Ohio Southwestern R. R	5,854
Chicago and Alton R. R	1,724
Cleveland, Cincinnati, Chicago and St. Louis R. R	9,795
Vandalia R. R	10,851
Wabash R. R. (east)	4,962
Toledo, St. Louis and Kansas City R. R	3,873
Chicago, Peoria and St. Louis R. R	62
Chicago, Burlington and Quincy R. R	1,730
St. Louis, Keokuk and Northwestern R. R	569
St. Louis, Chicago and St. Paul R. R	125
St. Louis, Peoria and Northern R. R	795
Total by railroad	100,239
By river	3,533
Total by rail and river	103,772

Itemized expenses of marketing mules at St. Louis.

Year and month of sale.	Kind and grade of product.	Consumer paid per head.	Producer received per head.	Combined expenses of distribution per head between producer and consumer.	Percentage of consumers' price to—		From St. Louis
					Distributers.	Producers.	
					Per ct.	*Per ct.*	*Miles.*
1899 (November).	Mules, cotton, 14½ to 15 hands high.	$60.00	$51.10	Commission, $1; yardage, 25 cents; one feed, 40 cents; $27 per car freight from Rolla, Mo. (12 head per car); total, $3.90.	10	90	111
1900 (April)	do	62.50	56.42	Commission, $1; yardage, 25 cents; one feed, 40 cents; $53 per car freight from Pleasanthill, Mo. (12 head per car); total, $6.08.	10	90	249
1899 (November).	Mules 16 to 16½ hands high.	95.00	89.60	Commission, $1; yardage, 25 cents; one feed, 40 cents; $45 per car freight from Marshfield, Mo. (12 head per car); total, $5.40.	6	94	213
1900 (April)	do	120.00	113.11	Commission, $1; yardage, 25 cents; one feed, 40 cents; $62 per car freight from Seneca, Mo. (12 head per car); total, $6.89.	6	94	326

16. COST OF MARKETING IOWA HORSES.

Iowa ranks among the foremost of horse-breeding States. Large shipments are made from Knoxville, Monticello, and Independence to Chicago and Eastern markets. It costs $160 per carload of 18 horses to New York and $66 to Chicago. The average prices received by producers in Iowa have been reported as follows:

	Each.
Draft horses	$125
Coach horses	150
Drivers	115
Export chunks (draft)	110
Common	75

The freight on a horse which sells for $75 is just as high as that on one which sells for $185 in the New York or Chicago market. Let it be assumed that on the average these different kinds of horses sold in the Chicago and New York markets at an advance of 20 per cent above the freight charges, which covered feeding on the way. The freight charges were approximately $9 per head, and the cost of yardage (keeping until sold) would be at least $1 per head after arriving in either of these markets, making a total of $10. This would bring the cost of these grades of horses up to $135, $160, $120, $125, $85, respectively. An addition of 20 per cent to these values would make them sell for $162, $192, $144, $150, $102.

On this basis of consumers' cost we may construct the following exhibit of the proportion going to the producer and to the distributers—that is, to the railroads and the dealers in the New York market:

Class.	Consumer paid.	Producer received.	Distributers received.	Per cent to producer.	Per cent to distributer.
Draft	$162	$125	$37	77.2	22.8
Coach	192	150	42	68.1	21.9
Drivers	144	110	34	76.4	23.6
Export chunks	150	115	35	69.6	30.4
Common	102	75	27	73.5	26.5

17. COST OF MARKETING CATTLE AT ST. LOUIS.

The principal sources of supply of cattle for the St. Louis market are Missouri, Arkansas, Texas, and Indian Territory.

During 1899 the receipts of native cattle were equal to any previous years in comparison, although the total receipts show a slight decrease. But it must be said that the demand was, generally speaking, far ahead of the supply. The heaviest arrivals in 1899 were in September, and the lightest receipts in May. Values increased gradually from the opening of the year until the close, when Christmas cattle sold up to $7.75 per 100 pounds, the highest price of the year. The aggregate receipts from the Southern States show an increase of nearly 700 carloads over the previous year, and they sold higher than in 1898 by several points. The State of Missouri shows up exceedingly well as a cattle producer, not only in quantity but in quality.

In the analysis of expenses given below the prices are taken at the seasons when the movement to market is most noteworthy. Sales by growers are made in November and in April. The estimates do not include feed charges at the St. Louis yards where they charge 75 cents per bale for hay and 60 cents per bushel for corn.

Cattle from Hermoson, Tex., for example, would have to unload on the road and feed once or twice and the feed charges would not exceed 10 cents per 100 pounds on the road and at St. Louis, so that it amounts to little in the total.

Itemized expenses of marketing cattle at St. Louis.[1]

Year and month of sale.	Kind and grade of product.	Consumer paid, per 100 pounds.	Producer received, per 100 pounds.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to—		From St. Louis.
					Distributers.	Producers.	
					Per ct.	*Per ct.*	*Miles.*
1899 (November).	Cattle, dressed beef, steers; average weight, 1,400 pounds.	$5.70	$5.63	Commission, 50 cents per head; yardage, 25 cents per head; 12 cents per 100 pounds freight from Dillon, Mo. Total, 17 cents per 100 pounds.	2	98	106
1900 (April)	Cattle, dressed beef, steers.	5.00	4.59	Commission, 50 cents per head; yardage, 25 cents per head; 36 cents per 100 pounds freight from Chandler, Okla. Total, 41 cents per 100 pounds.	8	92	491
1899 (November).	do	5.70	5.34	Commission, 50 cents per head; yardage, 25 cents per head; 31 cents per 100 pounds freight from Larned, Kans. Total, 36 cents per 100 pounds.	6	94	585
1900 (April)	do	5.00	4.37	Commission, 50 cents per head; yardage, 25 cents per head; 58 cents per 100 pounds freight from Hermoson, Tex. Total, 63 cents per 100 pounds.	13	87	1,152

[1] Reported by Mr. E. S. Tompkins, special agent, St. Louis

18. COST OF MARKETING HOGS AT ST. LOUIS.

The receipt of hogs at St. Louis in 1899 surpasses all previous records, the total aggregating 2,147,144 head, of which about three-fourths were slaughtered at home, and the balance shipped to Eastern packing centers. The monthly receipts averaged in the neighborhood of 180,000 head, and through the entire year the conditions were very satisfactory to all. The local packers bought the great bulk of the receipts, and consumed over a million three hundred thousand hogs; and the butchers use something like 250,000 hogs each year. Thus it will be seen that the hog market is in a very healthy condition. There are also a large number of buyers on the daily market in the interests of Eastern packing concerns, who bought, last year, nearly 600,000 hogs.

In the statistical table following, on the expenses of marketing hogs from farm shipping points to St. Louis, the prices are taken from that month in the spring and fall seasons in which the movement of hogs to the consuming market is most normal—namely, April and November.

The weight of 200 pounds is an average per head, and the price is for the bulk of the receipts. In addition, for feeding the charge is 60 cents per bushel for corn which can not be figured in, as hogs may be sold on morning of arrival, and usually are, when they no doubt receive an average of one feed, when each hog would get about 3 to 6 ears of corn.

Itemized expenses of marketing hogs at St. Louis.[1]

Year and month of sale.	Kind and grade of product.	Consumer paid, per 100 pounds.	Producer received, per 100 pounds.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to— Distributers.	Percentage of consumer's price to— Producers.	From St. Louis.
					Perct.	*Perct.*	*Miles.*
1899 (November).	Hogs (average weight, 200 pounds per head).	$4.00	$3.82	Commission for selling, 10 cents per head; yardage, 6 cents per head; 10 cents per 100 pounds freight from Anaconda, Mo. Total, 18 cents per 100 pounds.	5	95	57
1900 (April)	.....do	5.40	5.11	Commission for selling, 10 cents per head; yardage, 6 cents per head; 21 cents per 100 pounds freight from Dorchester, Mo. Total, 29 cents per 100 pounds.	5	95	244
1899 (November).	.....do	4.00	3.62	Commission for selling, 10 cents per head; yardage, 6 cents per head; 30 cents per 100 pounds freight from Fall River, Kans. Total, 38 cents per 100 pounds.	10	90	439
1900 (April)	.....do	5.40	5.14	Commission for selling, 10 cents per head; yardage, 6 cents per head; 18 cents per 100 pounds freight from Schuyler, Mo. Total, 26 cents per 100 pounds.	5	95	224

[1] Reported by Mr. E. S. Tompkins, special agent, St. Louis.

Weekly prices of live stock for 1899 (in cents per pound).

[Union Stock Yards Journal, St. Louis.]

Date.	Cattle, good to choice.		Native sheep, good to choice; average.	Hogs.		
	Native steers, 1,000 to 1,200 pounds.	Texas steers.		Butchers.	Mixed packers.	Lights.
1899.						
Jan. 6	4.25-5.45	3.85-4.25	3.50-4.25	3.65-3.75	3.55-3.70	3.40-3.65
13	4.25-5.20	3.75-4.25	3.50-4.25	3.70-3.80	3.60-3.75	3.45-3.70
20	4.25-5.50	3.90-4.30	3.75-4.15	3.80-3.85	3.65-3.80	3.50-3.70
27	4.00-5.80	4.15-4.35	3.70-4.00	3.85-3.90	3.75-3.85	3.65-3.80
Feb. 3	4.25-5.35	4.10-4.50	3.50-4.25	3.90-3.95	3.80-3.90	3.55-3.85
10	4.10-5.35	3.85-4.40	3.50-4.25	3.95-4.00	3.90-3.95	3.80-3.90
17	4.10-5.35	3.90-4.45	4.00-4.35	3.85-3.90	3.75-3.85	3.60-3.75
24	4.49-5.75	3.75-4.20	3.75-4.50	3.85-3.90	3.75-3.85	3.65-3.80
Mar. 3	4.00-4.35	3.70-4.30	3.75-4.70	3.80-3.85	3.70-3.80	3.60-3.80
10	4.00-4.50	3.75-4.40	4.00-4.75	3.80-3.85	3.70-3.80	3.60-3.75
17	4.00-4.50	3.75-4.20	4.00-4.75	3.90-3.97½	3.85-3.95	3.65-3.90
24	4.00-4.50	3.85-4.50	4.10-4.75	3.85-3.90	3.77-3.87½	3.70-3.80
31	4.00-5.00	3.75-4.40	4.25-4.75	3.75-3.80	3.65-3.75	3.55.3.70
Apr. 7	4.25-5.25	4.25-5.55	4.00-5.00	3.85-3.90	3.75-3.85	3.70-3.85
14	4.25-5.25	4.00-4.50	4.25-5.00	3.85-3.90	3.75-3.85	3.65-3.80
21	4.10-5.25	4.00-4.50	4.50-5.15	4.00-4.12½	3.90-4.00	3.75-4.00
28	4.50-4.90	4.10-4.40	4.20-5.00	3.95-4.05	3.90-4.97½	3.75-3.95
May 5	4.40-4.80	4.15-4.50	4.25-5.00	3.85-3.90	3.75-3.85	3.60-3.80
12	4.15-5.05	4.25-4.65	4.40-5.10	3.90-3.95	3.80-3.90	3.65-3.85

Weekly prices of live stock for 1899 (in cents per pound)—Continued.

Date.	Cattle, good to choice.		Native sheep, good to choice; average.	Hogs.		
	Native steers, 1,000 to 1,200 pounds.	Texas steers.		Butchers.	Mixed packers.	Lights.
1399.						
May 19	4.00–4.95	4.25–4.65	4.25–5.30	3.90–3.95	3.80–3.90	3.70–3.90
26	4.00–5.10	4.30–4.65	4.35–5.60	3.80–3.85	3.70–3.80	3.65–3.75
June 2	4.00–5.15	4.40–4.80	4.25–5.35	3.80–3.85	3.75–3.80	3.60–3.75
9	4.00–5.25	4.10–4.60	3.75–4.35	3.85–3.90	3.80–3.90	3.75–3.85
16	4.00–5.05	4.10–4.60	4.15–4.75	3.80–3.85	3.75–3.82½	3.75–3.82½
23	4.05–4.15	4.00–4.40	4.00–4.75	3.80–3.85	3.75–3.80	3.70–3.70
30	4.10–5.40	4.20–4.70	4.40–4.75	3.85–3.90	3.80–3.85	3.75–3.85
July 7	4.10–5.50	4.20–4.70	4.00–4.75	3.95–4.00	3.90–3.95	3.75–3.95
14	4.15–5.40	4.10–4.60	4.00–4.65	4.45–4.50	4.35–4.45	4.30–4.40
21	4.15–5.40	3.75–4.35	4.00–4.65	4.55–4.60	4.45–4.50	4.30–4.55
28	4.15–5.40	3.75–4.45	4.00–4.65	4.55–4.60	4.50–4.55	4.45–4.55
Aug. 4	4.00–5.40	3.75–4.30	3.70–4.10	4.75–4.80	4.65–4.75	4.65–4.75
11	4.00–5.50	3.85–4.30	3.50–4.00	4.70–4.75	4.60–4.70	4.55–4.70
18	4.10–5.65	3.80–4.50	3.50–4.00	4.80–4.85	4.70–4.80	4.65–4.80
25	4.45–5.85	3.60–4.20	3.50–4.10	4.75–4.80	4.65–4.75	4.65–4.80
Sept. 1	4.30–5.40	3.45–3.85	3.55–4.00	4.65–4.70	4.50–4.65	4.50–4.70
8	4.50–5.90	3.40–4.00	3.50–4.25	4.65–4.70	4.55–4.65	4.45–4.70
15	4.30–6.10	3.45–4.10	3.50–4.15	4.65–4.70	4.55–4.65	4.45–4.70
22	4.75–5.85	3.35–3.90	3.50–4.25	4.70–4.75	4.60–4.70	4.60–4.70
29	4.10–5.15	3.90–4.50	3.50–4.10	4.70–4.75	4.60–4.70	4.55–4.70
Oct. 6	4.10–5.65	3.25–3.80	3.25–4.00	4.60–4.65	4.55–4.65	4.40–4.65
13	4.10–5.80	3.25–3.75	3.40–4.15	4.55–4.60	4.45–4.55	4.40–4.55
20	4.60–5.60	3.40–3.80	3.25–4.15	4.35–4.40	4.25–4.35	4.10–4.35
27	4.00–5.50	3.40–3.70	3.00–4.20	4.25–4.30	4.15–4.25	4.10–4.25
Nov. 3	4.00–5.60	3.30–3.75	3.80–4.35	4.10–4.15	4.00–4.10	4.00–4.10
10	4.00–5.70	3.75–4.20	3.25–4.50	4.15–4.20	4.10–4.17½	4.00–4.15
17	4.00–5.65	3.50–4.20	3.10–4.25	4.00–4.05	3.90–4.00	3.75–3.95
24	4.00–5.30	4.00–5.50	2.85–4.25	3.95–4.00	3.85–3.95	3.75–3.95
Dec. 1	4.15–5.25	3.90–4.30	3.50–4.25	3.95–3–97½	3.90–3.95	3.80–3.85
8	4.00–5.75	4.10–4.60	3.50–4.25	4.00–4.05	3.90–3.95	3.80–3.85
15	4.15–6.00	3.75–4.60	3.25–4.50	4.10–4.15	4.00–4.05	3.85–3.95
22	4.00–5.75	3.75–4.60	3.25–4.15	4.00–4.15	4.00–4.05	3.80–3.85
29	4.00–5.75	3.75–4.60	4.15–5.10	4.45–4.47½	4.35–4.40	4.25–4.30

19. EXPENSES OF MARKETING A 1,000-POUND STEER.

Distance is always the chief difficulty to overcome in marketing farm produce. In the case of cattle the nearby producer has the alternative of driving cattle to market, but the vast majority of cattle are drawn from too great distances to do this. The three great markets located on the Missouri River draw their supplies originally from the Rocky Mountain States and the Southwestern States west of the Mississippi. Probably the bulk of the cattle received at these points originate within the 500-mile limit, but not a few are brought from beyond the 1,000-mile limit. Possibly the majority of fed cattle shipped to the country to be prepared for market are found within a 200-mile limit of the market through which they have been passed from the range to the farmer for fattening.

On the basis of these assumptions as to distances we make an estimate of the cost of marketing a typical grade of cattle. In this instance we take the range steer of 1,000 pounds weight as representative. The shipments are presumably made from three different points of origin: (1) 1,000 miles or over from market; (2) about 500 miles from market, and (3) between 100 and 200 miles from market. Knowing the actual freight rates from actual shipping points to the primary markets, also the commercial charges, such as commission, and the maintenance expenses of stock in transit and at the terminal yard, we can get at a fairly representative result in the division of expenses among the railroads and the dealers.

The principal expenses of shipping beef cattle from grower in the range States to market is of course the freight charge. If we estimate that it costs 50 cents for commission per head, 25 cents for yardage on a range steer of 1,000 pounds weight, we have an expense of 7.5 cents per 100 pounds. To this should be added an expense of 10 cents per 100 pounds for feed charges en route on long journeys, such as that from Hermosa, Tex., to St. Louis (1,152 miles). The total expense outside of freight is 17.5 cents per 100 pounds. The freight to St. Louis is 58 cents per 100 pounds, making a total expense of 75.5 cents from producer to consumer on 1,000 pounds live weight. This total expense is divided as follows for a 1,000-pound steer:

Expenses of marketing a 1,000-pound steer, Hermoson, Tex., to St. Louis (1,152 miles.)

Kinds of expense.	Amounts of expense.	Percentage.
Railway charges	$5.80	77
Commercial charges	.75	10
Maintenance charges	1.00	13
Total	7.55	100

This apportionment of total expenses would indicate that the commercial handling of cattle is done at the outlay of 10 per cent of the total expense between producer and consumer. It costs 13 per cent to maintain the animal in proper condition during transit. In other words, the animal's maintenance is quite an appreciable charge upon this traffic. The commercial labor and capital employed in the transaction, together with the expense of feeding, amount to over one-seventh of the railway charges. That is, the physical movement by rail costs 77 per cent of the whole, or three times as much as it does to maintain the animal and the commercial agencies responsible for its distribution. This, in a general way, shows where the burden of expense falls in marketing live stock of this species by the producer living at the maximum distance from markets at or near the 1,000-mile limit.[1]

At about 500 miles from market the situation of the producer is somewhat different, though not materially so. The expenses of feeding would be about 8 cents per 100 and the rate of commission and yardage identically the same. The position of the producer or original shipper would be altered mainly by reason of the shorter distance and lower freight rate.

The distance from Chandler, Okla., to St. Louis, to which much of the Territory's cattle goes, is 494 miles, practically 500 miles. The rate on dressed beef cattle from Chandler to St. Louis is 36 cents per 100 pounds. Calculating other items of expense the same as for the more distant point of origin, we get the apportioned expenses of marketing a 1,000 pound steer produced 500 miles from the terminal market.

Expenses of marketing a 1,000-pound steer—

FROM CHANDLER, OKLA., TO ST. LOUIS, MO. (494 MILES).

Kinds of expenses.	Amount of expenses.	Percentage.
Railway charges	$3.60	69.9
Commercial charges	.75	14.5
Maintenance charges	.80	15.6
Total	5.15	100

FROM DILLON TO ST. LOUIS, MO., (106 MILES).

Railway charges	$1.20	60.0
Commercial charges	.75	37.5
Maintenance charges	.05	....
Total	2.00	2.5

A comparison of the percentages in each of these estimates, based on actual charges, brings out the facts (1) that the railway charges in the total cost of marketing live cattle tend to diminish with the distance between producer and the market as compared with commercial charges; (2) that the commercial charges, on the contrary, tend to increase—that is, the shorter the haul to market the larger proportion of total charges goes for commissions and other similar expenses; (3) maintenance charges vary with the time required to put cattle down at market from point of shipment. These expenses are quite unimportant for short distances requiring only four or five hours of transit, but for distances exceeding the limit of time allowed by law between feeds for cattle in transit the actual expense is about as great for a 500-mile trip as it is for a 1,000-mile trip. The proportionate expense is of course higher for the shorter than for the longer trip. The comparative table below gives the proportions of outlay for each kind of charges on the basis of distances.

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[1] Cattle from Hermoson would have to be unloaded on the way and fed once or twice. Feed charges would include these items of cost on the road and at St. Louis between time of shipping and marketing. Yardage at the terminal market is charged to commercial charges rather than to maintenance, because it is a fee rather than a cost, and therefore akin to a commission charge.

Comparison of marketing expenses by distances (based on a 1,000-pound dressed beef steer).

Kinds of expenses.	100 miles from market.	500 miles from market.	1,000 miles from market.
	Per cent.	*Per cent.*	*Per cent.*
Railway charges	60.0	69.9	77
Commercial charges	37.5	14.5	10
Maintenance	2.5	15.6	13
Total	100	100	100

20. COST OF FEEDING CATTLE ON LONG-DISTANCE SHIPMENTS.

Relative to feeding charges on cattle from Hermoson, Tex., a charge of 10 cents per 100 pounds of cattle is made. As a maximum say the cattle weighed only 1,100 pounds each and 20 head to the car—

20 head at 25 cents each, one feed	$5.00
20 head at 25 cents each, three feeds	15.00

Twenty-two thousand pounds of cattle at $15 total charges for feeding gives less than 7 cents per 100 for feeding.

This feeding is done at special yards used for that purpose and the feeding charges are kept down to the minimum. A charge of 25 cents per steer would give a peck of corn and a quarter bale of hay to the feed. It may be higher or lower in different places where they feed, but figures given will make a fair average. If these charges even were somewhat greater or less, they would not change materially the percentage shown in the report.

21. THE COST OF MARKETING LIVE STOCK AT KANSAS CITY.

Reports received from special agents at different markets have presented the essential items involved in disposing of live stock. The report from Kansas City covers cattle, sheep, and hogs. The object has been to get such information as would represent the standard quality of stock rather than to comprehend the entire movement.

The prices of cattle named represent only about 25 per cent of the receipts for the month named, and they are the highest-priced cattle received at Kansas City. They comprise what is known in the trade at "dressed-meat and export steers." The other classes sold are cows and heifers, stockers, feeders, and milch cows. Of Western and Southern cattle there are corn or meal fed steers and grass beef steers and stockers and feeders. No one class will consequently anywhere near represent the total sales on this market. Of course the expense of marketing each class is the same. With hogs and sheep the situation is different. The prices given will represent 80 per cent of the receipts for the month given. In the matter of sheep, September is taken as the price month, as more sheep come to market from first hands or the farm then than during any other month. In the spring—say April and May—when receipts are heaviest, a large part of the arrivals are from feed lots, and represent sheep and lambs that had been bought up in the fall by professional feeders and fattened through the winter months for the market. When marketed in April and May they generally sell for $1 per hundredweight more than the receipts in September. The expense of marketing, however, is the same in both instances.

Itemized expenses of marketing live stock at Kansas City.[1]

Year and month of sale.	Kind and grade of product.	Consumer paid per 100 pounds, average.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to— Distributers.	Percentage of consumer's price to— Producers.	From Kansas City.
					Per cent.	*Per cent.*	
1899, November.	Cattle, 1,200 to 1,500 pounds, natives.	$5.35	$5.15¾	Commission for selling, 5 cents per 100 pounds; yardage, 25 cents per head; feed, ¼ cent per 100 pounds; freight, 12 cents per 100 pounds. Total, 19¼ cents per 100 pounds.	3.59	96.41	Noncompetitive point 134 miles (Cottonwood Falls, Kans.).
	do	5.35	4.99¾	Commission for selling, 5 cents per 100 pounds; yardage, 25 cents per head; feed, ¼ cent per 100 pounds; freight, 28 cents per 100 pounds. Total, 35¼ cents per 100 pounds.	6.58	93.42	Competitive point 400 miles (Oklahoma, Okla.).
	do	5.35	5.13¼	Commission for selling, 5 cents per 100 pounds; yardage, 25 cents per head; feed, ¼ cent per 100 pounds; freight, 14½ cents per 100 pounds. Total, 21¾ cents per 100 pounds.	4.06	95.94	Competitive point 199 miles (Concordia, Kans.).
	do	5.35	4.88¾	Commission for selling, 5 cents per 100 pounds; yardage, 25 cents per head; feed, ¼ cent per 100 pounds; freight, 29 cents per 100 pounds. Total, 36¼ cents per 100 pounds.	6.77	93.23	Noncompetitive point 382 miles (Stillwater, Okla.).
1899, September.	Sheep, 70 to 110 pounds, average.	3.95	3.62½	Commission for selling, ½ cent per 100 pounds; yardage, 5 cents per head; feed, 8 cents per 100 pounds; freight, 19 cents per 100 pounds. Total, 32½ cents per 100 pounds.	8.22	91.78	Competitive point 301 miles (Grand Island, Nebr.).
	do	3.95	3.65	Commission for selling, ½ cent per 100 pounds; yardage, 5 cents per head; feed, 8 cents per 100 pounds; freight, 16½ cents per 100 pounds. Total, 30 cents per 100 pounds.	7.59	92.41	Competitive point 235 miles (Hutchison, Kans.).
	do	3.95	3.58	Commission for selling, ½ cent per 100 pounds; yardage, 5 cents per head; feed, 8 cents per 100 pounds; freight, 23½ cents per 100 pounds. Total, 37 cents per 100 pounds.	9.35	90.65	Noncompetitive point 524 miles (Las Animas, Colo.).
	do	3.95	3.50½	Commission for selling, ½ cent per 100 pounds; yardage, 5 cents per head; feed, 8 cents per 100 pounds; freight, 31 cents per 100 pounds. Total, 44½ cents per 100 pounds.	11.26	88.74	Noncompetitive point 715 miles (Fort Collins, Colo.).

[1] Reported by Mr. Cuthbert Powell, special agent, Kansas City, Mo.

Itemized expenses of marketing live stock at Kansas City—Continued.

Year and month of sale.	Kind and grade of product.	Consumer paid per 100 pounds, average.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to— Distributers.	Percentage of consumer's price to— Producers.	From Kansas City.
					Per cent.	*Per cent.*	
1899, November..	Hogs, packing..	3.95	3.65¾	Commission for selling, 3½ cents per 100 pounds; yardage, 6 cents per head; feed, ⅜ cents per 100 pounds; inspection, $\frac{9}{10}$ cents per 100 pounds; freight, 21½ cents per 100 pounds. Total, 29.27½ cents per 100 pounds.	7.41	92.59	Competitive point 217 miles (McPherson, Kans.).
	.....do..........	3.95	3.68¾	Commission for selling, 3½ cents per 100 pounds; yardage, 6 cents per head; feed, ⅜ cents per 100 pounds; inspection, $\frac{9}{10}$ cents per 100 pounds; freight, 18½ cents per 100 pounds. Total, 26.27½ cents per 100 pounds.	6.65	93.35	Noncompetitive point 237 miles (Jewell City, Kans.).
	.....do..........	3.95	3.74¾	Commission for selling, 3½ cents per 100 pounds; yardage, 6 cents per head; feed, ⅜ cents per 100 pounds; inspection, $\frac{9}{10}$ cents per 100 pounds; freight, 12½ cents per 100 pounds. Total, 20.27½ cents per 100 pounds.	5.13	94.87	Competitive point 101 miles (Fall City, Nebr.).
	.....do..........	3.95	3.56¼	Commission for selling, 3½ cents per 100 pounds; yardage, 6 cents per head; feed, ⅜ cents per 100 pounds; inspection, $\frac{9}{10}$ cents per 100 pounds; freight, 31 cents per 100 pounds. Total, 38.77½ cents per 100 pounds.	9.81	90.19	Noncompetitive point 382 miles (Stillwater, Okla.).

22. METHODS OF MARKETING CATTLE.

From southwestern sources cattle are marketed through commission merchants at market centers under favorable conditions to all parties concerned. There is also the local buyer, whose purchases from the grower ultimately pass into the commission merchant's hands. There are, therefore, at the utmost three persons through whose hands cattle pass from the ranch to the packer: The local dealer, the railroad, and the commission merchant. The rate of commission at most large markets is 50 cents per head. The rise of mammoth slaughterhouse establishments has brought into the productive territory the buyers for these houses. This, of course, eliminates all other commercial expenses except the salary of the buyer and freight. The freight from Gonzales, Tex., to Kansas City, Chicago, or St. Louis averages $5 per head. At the market price of $4.50 per 100 a steer of 1,000 pounds would bring $45. Allowing 50 cents per head for all other expenses involved in transit from shipping point to sale in stock yard, the total cost of marketing would amount to $6 on the average, that is, 13⅓ per cent of the consumer's cost of the steer. The producer gets 86⅔ per cent.

23. TERMINAL CHARGES ON LIVE STOCK.

There are no terminal charges on live stock at Kansas City; the railway rates named include delivery at the stock yards at that market. At Chicago, on the other hand, there is a charge of $2 per car for transfers from the railroad bringing the car to that city to the stock yards in control of the main portion of the stock received at Chicago. This must to some extent prejudice the shipper by increasing expenses.

At Omaha, as at the more western stock yards generally, the actual charge is merely for feed consumed and weighing charges.

The following description of handling stock forwarded by the shipper at the Omaha yards is characteristic, in this respect, of care and cost at terminals of the entire trade at these great centers:

"Every pen is supplied with a trough and hydrant so that under no circumstances is stock at any time obliged either to be moved or go without. Careful attention has been paid to the sewerage and drainage, resulting in as perfect and complete a system as is known anywhere in the country. The yard company cares for the stock from the time of arrival until it is disposed of, either sold or loaded out, their care including the handling, watering, feeding, and weighing. Thus every shipper is assured of the best of treatment, whether he accompanies his consignment or not. No charge whatever is made for the use of the yards and one charge for weighing, usually called yardage, covers the whole cost to the shipper, no matter how long his stock may remain on the market, and the weighing charge is only collected when stock is sold, so that if it is shipped from this market to some other by him, the only expense to be incurred here is for such an amount of feed as may be given to the stock by his orders: this is of big advantage to Western shippers especially, giving them an opportunity to try two markets without additional expense. All through-billed stock receives the same care and attention from the company's employees as though locally billed."

When stock is sold weighing charges are as follows:[1]

		Cents.
Cattle	per head	25
Calves	do	10
Sheep	do	5
Hogs	do	8

Feed charges are as follows:[1]

		Cents.
Hay	per cwt	80
Corn	per bushel	60
Oats	do	60

24. SHEEP MARKETS EAST AND WEST.

With the lowered and irregular prices of wool in the United States sheep raising for mutton has largely increased. This increase is to some extent measured by the increase of slaughterage demands in the West. Since 1887 the killings in the West have increased fourfold; those at seaboard points have decreased, though only slightly, and the total for the country has advanced from 4,605,000 in 1887 to 7,635,000 in 1898. The total value of sheep in the United States has increased from about $65,000,000 in 1896 to $108,000,000 in 1899, owing mainly, it may be said, to the increase in the meat-producing value of this species of live stock. It may be fairly inferred that the Western producer has improved his position by reason of this rise of consuming industries in packing centers, and also that the Central and Eastern producer has, owing to the general rise in meat values, found his flock an increasingly profitable investment in supplying local consumption of mutton. This is all the more so, owing to the fact that the competition of Western mutton has not been so keen with the Eastern product as it has been in the case of beef.

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[1] Report Union Stock Yards Company, Omaha, Nebr., 1899.

The tendency described—toward meat production and away from wool—in sheep raising is measured statistically in the table below, giving the total of sheep in the United States and the receipts at four Western markets since 1892:

Year.	Sheep in United States.	Receipts at four Western markets.
1892	44,938,000	3,070,500
1893	47,273,000	4,203,000
1894	45,048,000	4,225,400
1895	42,294,000	4,931,300
1896	38,299,000	5,532,800
1897	36,819,000	5,950,000
1898	37,656,960	6,090,700
1899	39,114,453	6,132,744

This table shows that in 1892 the producer sold 6.8 per cent of his flock of sheep for slaughtering, and in 1899 he sold nearly 16 per cent of his flock. Evidently the meat market is sucessfully competing with the wool market for the farmer's sheep.

25. THE COST OF PRODUCTION OF BEEF CATTLE.

The following figures of record are furnished by a large stock-feeding firm at Ames, Nebr. It represents commercial stock production on a large scale, in which the economies of such production are taken advantage of. The first table gives the average cost of production for a series of 13 years. The second gives the net prices received per head for grass-fed cattle for 19 years. The third gives the proportion of the price received for grass-fed cattle that goes to producer and distributer, respectively. The fourth statement gives the comparative prices received for range cattle when marketed at Ames for feeding, and at other cattle markets, at a given date, December 11, 1899, and for a series of 7 years earlier.

(1) *Cost of Western range cattle (grain-fed, at Ames, Nebr.), per hundredweight, laid down at market, and the profit and loss per hundredweight.*[1]

Year.	Cattle sold at market.	Weight of cattle.	Original cost of cattle.	Cost of feeding.	Cost of transportation and sale.	Total cost at market.
		Pounds.				
1886-87	5,417	5,942,449	$133,799.90	$111,796.88	$17,660.91	$263,257.69
1887-88	5,586	6,898,710	156,016.98	175,232.82	18,364.02	349,613.82
1888-89	4,269	5,541,162	125,508.60	93,789.93	6,181.88	225,480.41
1889-90	6,033	6,750,927	133,027.65	111,127.86	9,179.51	253,355.02
1890-91	7,298	9,285,562	196,243.22	280,900.02	17,166.31	494,309.55
1891-92	2,176	3,045,390	72,639.91	79,018.37	9,762.85	161,421.13
1892-93	1,222	1,367,250	21,517.91	14,660.30	2,681.69	38,859.90
1893-94	2,539	3,254,775	54,207.65	39,329.11	7,008.21	100,554.97
1894-95	5,925	7,643,250	167,064.82	161,999.73	22,233.99	351,298.54
1895-96	3,827	5,327,300	126,690.22	67,901.03	12,446.30	207,237.55
1896-97	5,495	7,167,012	154,916.71	82,803.42	15,575.45	253,295.58
1897-98	9,069	11,836,631	324,872.57	178,224.86	25,125.85	528,223.28
1898-99	6,657	9,245,270	270,770.94	184,837.17	22,592.54	478,200.65
Total	65,513	83,305,688	1,937,277.08	1,581,621.50	185,979.51	3,704,898.09

Year.	Cost of cattle per cwt.	Cost of feeding per cwt.	Cost of transportation per cwt.	Total cost per cwt.	Gross proceeds.	Gross proceeds per cwt.	Profit per cwt.	Loss per cwt.
1886-87	$2.25	$1.88	$0.29	$4.42	$242,476.14	$4.08	....	$0.34
1887-88	2.26	2.54	.27	5.07	312,828.23	4.53	....	.54
1888-89	2.27	1.69	.11	4.07	207,079.48	3.74	....	.33
1889-90	1.97	1.65	.14	3.76	256,429.36	3.97	$0.21	....
1890-91	2.11	3.02	.19	5.32	489,816.38	5.27	....	.05
1891-92	2.38	2.60	.32	5.30	133,400.46	4.38	....	.92
1892-93	1.57	1.07	.20	2.84	49,787.28	3.64	.80	....
1893-94	1.66	1.20	.22	3.08	121,421.53	3.73	.65	....
1894-95	2.18	2.12	.29	4.59	378,812.49	4.96	.37	....
1895-96	2.38	1.27	.23	3.88	201,505.06	3.83	....	.05
1896-97	2.16	1.16	.22	3.53	311,745.25	4.35	.82	....
1897-98	2.74	1.51	.21	4.46	538,349.42	4.55	.09	....
1898-99	2.93	1.97	.24	5.14	471,291.88	5.09	....	.05
Total	....	....	....	....	3,717,972.96	....	....	....

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[1] Reported by Mr. Frederick Allen, Ames, Nebr.

(2) *Sales of grass-fed cattle from Wyoming and Montana at market price for 19 years.*

Year.	Number.	Average weight.	Average price.	Net proceeds.	Net per head.	Year.	Number.	Average weight.	Average price.	Net proceeds.	Net per head.
		Lbs.						*Lbs.*			
1881...	2,016	1,006	$3.73	$61,296.76	$30.36	1891...	6,230	1,164	$3.80	$239,510.77	$38.44
1882...	4,577	939	4.33	153,718.55	33.58	1892...	6,414	1,178	3.33	215,557.53	33.60
1883...	4,862	967	4.11	161,703.74	33.25	1893...	3,564	1,229	3.59	135,181.17	37.92
1884...	4,267	1,021	4.34	162,610.99	38.11	1894...	4,743	1,197	3.63	176,621.35	37.23
1885...	3,827	1,024	3.67	120,624.29	31.51	1895...	5,623	1,224	3.84	229,368.13	40.79
1886...	2,399	1,015	3.25	66,785.80	27.83	1896...	5,051	1,183	3.39	171,685.52	33.99
1887...	1,988	1,092	2.95	53,732.29	27.02	1897...	2,793	1,108	3.71	97,981.64	35.08
1888...	3,130	1,106	3.43	103,006.89	32.90	1898...	1,402	1,166	4.08	58,040.61	41.39
1889...	1,596	1,141	3.09	48,130.44	30.15	1899...	4,994	1,182	4.57	239,596.33	47.97
1890...	1,177	1,064	2.95	31,243.61	26.54						

(3) *Sales of grass-fed cattle from Wyoming and Montana at market price.*

Year.	Gross proceeds per head.	Net proceeds per head.	Expenses of marketing.	Per cent to producer.	Per cent to distributer.	Year.	Gross proceeds per head.	Net proceeds per head.	Expenses of marketing.	Per cent to producer.	Per cent to distributer.
1881.....	$37.52	$30.36	$7.16	80.9	19.1	1891....	$44.23	$38.44	$5.79	86.9	13.1
1882.....	40.66	33.58	7.08	82.5	17.5	1892....	39.23	33.60	5.63	85.6	14.3
1883.....	39.74	33.25	6.49	83.4	16.6	1893....	44.12	37.92	6.20	85.9	14
1884.....	44.31	38.11	6.20	86	14	1894....	43.45	37.23	6.22	85.6	14.3
1885.....	37.58	31.51	6.07	83.8	16.1	1895....	47.00	40.79	6.21	86.6	13.3
1886.....	32.99	27.83	5.16	84.3	15.6	1896....	40.10	33.99	6.11	84.7	15.2
1887.....	32.21	27.02	5.19	83.9	16.1	1897....	41.10	35.08	6.02	85.3	14.6
1888.....	37.93	32.90	5.03	86.7	13.3	1898....	47.57	41.39	5.78	87.1	12.9
1889.....	35.25	30.15	5.10	85.5	14.5	1899....	54.02	47.97	6.05	88.8	11.2
1890.....	31.39	26.54	4.85	84.5	15.5						

(4) *Statement of range cattle (grass-fed cattle) shipments to market and to Ames, December 11, 1899.*

Class.	Number.		Average weight.		Average price.		Net proceeds.		Net per head.	
	1898.	1899.	1898.	1899.	1898.	1899.	1898.	1899.	1898.	1899.
To market:			*Lbs.*	*Lbs.*						
Steers	1,251	3,822	1,166	1,224	$4.09	$4.62	$52,670.75	$193,207.69	$42.10	$50.55
Heifers	132	1,151	1,067	1,036	4.07	4.31	4,901.03	45,658.68	37.03	39.67
Cows	19	20	945	1,067	3.15	3.65	468.83	705.31	24.67	35.26
Bulls	......	1	......	920	......	3.25	....	24.65	......	24.65
Total	1,402	4,994	1,154	1,182	4.08	4.57	58,040.61	239,596.33	41.39	47.97
To Ames:										
Steers	6,030	1,874	1,098	1,116	3.75	4.10	226,332.70	79,128.75	37.53	42.22
Heifers	566	603	1,036	899	3.50	3.90	18,582.85	19,396.40	32.83	32.16
Cows	6	234	1,051	939	3.25	3.50	184.19	6,985.85	30.69	29.85
Bulls	14	11	1,188	1,259	3.00	3.25	443.99	405.67	31.71	36.88
Yearlings	......	94	......	605	......	4.25	....	2,236.58	......	23.79
Total	6,616	2,816	1,092	1,038	3.72	4.01	245,543.73	108,153.25	37.11	38.40
Grand total	8,018	7,810	......	......	......	......	303,584.34	347,749.58	......	......
Top steers	357	950	1,222	1,274	4.27	4.93	16,473.84	53,566.41	46.14	56.38
Top sale	42	200	1,226	1,342	4.50	5.25	....	....	50.10	63.89

Total to market.

Year.	Number.	Average weight.	Average price.	Net proceeds.	Net per head.
		Pounds.			
1898	1,403	1,154	$4.08	$58,083.44	$42.04
1897	2,793	1,108	3.71	97,981.64	35.08
1896	5,051	1,183	3.39	171,685.52	83.99
1895	5,623	1,224	3.84	229,368.13	40.79
1894	4,743	1,197	3.63	176,621.35	37.23
1893	3,564	1,229	3.59	135,181.17	37.92
1892	6,414	1,178	3.33	215,557.58	35.08

26. DAILY PRICES FOR 1898 AND 1899 AT KANSAS CITY.

In the comparison of prices of different markets it is often necessary to know the price at which the bulk of the sales at the given market are made. The bulk price is in many respects more truly representative of the state of the market than top prices would be. In times of brisk demand, especially, constant complaint is made of the quality of stock not coming up to the best standard. If the grades comprise a comparatively small proportion of the sales as they often may, the bulk prices represent the level of prices more exactly than top prices do; and the bulk prices always more nearly coincide with what the majority of producers get. The top prices may more precisely represent the prices which the exceptional producer realizes for his stock.[1]

The top prices for native beef steers, native stockers and feeders, and Texas or Indian steers on each commercial day of 1899.

[The tables appended show the top prices of native beef steers, native stockers and feeders, and Texas or Indian steers sold on the Kansas City market on each day of 1899. The asterisk (*) is inserted for Sunday.]

Day.	January.					February.				
	Beef steers.	Quarter steers.	Native fed, Texas or Indian.	Stockers.	Feeders.	Beef steers.	Quarter steers.	Native fed, Texas or Indian.	Stockers.	Feeders.
1	(*)	(*)	(*)	(*)	(*)	$5.85	$4.75	$4.35	$5.25	$4.75
2	$5.30	$4.40	$4.40	$4.35	$4.05	5.65	4.30	4.50	5.00	4.75
3	5.60	4.00	4.50	4.25	4.25	5.40	4.75	3.85	4.80	4.70
4	5.50	4.25	4.65	4.50	4.30	....	....	3.85	4.00	....
5	5.60	4.10	4.75	4.75	4.25	(*)	(*)	(*)	(*)	(*)
6	5.45	4.50	4.80	4.35	4.50	5.20	4.90	4.55	4.50	4.60
7	....	....	4.25	3.40	....	5.55	4.25	....	4.75	4.75
8	(*)	(*)	(*)	(*)	(*)	5.75	4.40	4.75	4.90	4.65
9	5.25	4.85	4.50	4.30	4.25	5.65	3.60	....	4.65	4.65
10	5.65	4.30	4.65	4.65	4.60	5.50	4.70	....	4.75	4.60
11	5.40	4.45	4.75	4.60	4.52½	4.30	4.15	....	3.40	....
12	5.55	4.15	5.00	4.60	4.40	(*)	(*)	(*)	(*)	(*)
13	5.60	4.35	5.00	4.50	4.75	5.37½	4.45	4.55	4.15	4.50
14	....	....	....	4.50	3.65	5.60	4.15	4.40	5.10	4.65
15	(*)	(*)	(*)	(*)	(*)	5.50	4.37½	4.30	5.00	4.60
16	5.30	4.70	4.75	4.60	4.50	5.20	1.77½	4.20	5.00	4.75
17	5.80	4.35	3.65	4.75	4.60	5.25	4.65	....	4.95	4.80
18	5.55	4.85	4.85	4.75	4.60	....	....	....	4.50	....
19	5.55	4.35	5.10	4.75	4.65	(*)	(*)	(*)	(*)	(*)
20	5.65	4.65	4.45	4.90	4.65	5.05	4.65	4.30	4.70	4.60
21	4.55	4.15	....	4.60	4.50	5.40	4.55	4.45	5.15	4.65
22	(*)	(*)	(*)	(*)	(*)	5.45	4.35	4.70	5.05	4.75
23	5.10	4.45	4.55	4.85	4.70	5.45	4.60	4.50	5.25	4.75
24	5.70	4.50	4.75	5.10	4.75	5.50	4.40	4.65	5.00	4.75
25	5.55	4.85	4.15	5.00	4.75	....	....	....	....	....
26	5.80	4.10	4.60	5.00	4.75	(*)	(*)	(*)	(*)	(*)
27	5.60	4.60	4.60	5.00	4.60	5.25	4.45	4.20	5 00	4.67½
28	....	....	....	5.00	....	5.50	4.30	4.25	5.40	4.70
29	(*)	(*)	(*)	(*)	(*)	....	....	....	....	....
30	5.20	4.80	....	4.85	4.70	....	....	....	....	....
31	5.70	4.85	4.25	5.00	4.82½	....	....	....	....	....

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[1] Quotations are from The Drovers' Daily Telegram.

The top prices for native beef steers, native stockers and feeders, and Texas or Indian steers on each commercial day of 1899—Continued.

Day.	March.					April.				
	Beef steers.	Quarter steers.	Native fed, Texas or Indian.	Stockers.	Feeders.	Beef steers.	Quarter steers.	Native fed, Texas or Indian.	Stockers.	Feeders.
1	$5.50	$4.55	$4.35	$5.40	$4.85	......	$3.75	......	......	$4.25
2	5.30	4.27½	4.32½	5.40	4.75	(*)	(*)	(*)	(*)	(*)
3	5.20	4.55	3.80	5.30	4.55	$5.30	4.85	$4.30	$5.00	4.60
4	......	......	......	......	......	5.50	4.35	4.40	5.25	4.80
5	(*)	(*)	(*)	(*)	(*)	5.45	4.60	4.75	5.10	4.70
6	5.00	5.00	3.85	5.15	4.50	5.35	4.55	......	5.30	5.00
7	5.40	4.25	4.00	5.00	4.65	5.30	4.40	4.50	4.90	4.60
8	5.50	4.30	4.37½	5.25	4.90	......	......	......	......	4.40
9	5.30	4.45	4.60	5.15	4.75	(*)	(*)	(*)	(*)	(*)
10	5.27½	4.35	......	5.15	4.65	5.10	4.60	4.50	5.25	4.50
11	......	......	......	......	......	5.20	4.00	4.25	5.25	4.85
12	(*)	(*)	(*)	(*)	(*)	5.15	4.40	4.20	5.40	4.50
13	5.20	4.55	4.50	5.00	4.85	5.00	4.25	......	5.40	4.70
14	5.35	4.25	4.60	5.25	4.75	5.37½	4.60	4.35	5.25	4.55
15	5.35	4.60	4.50	5.15	4.80	......	......	......	......	......
16	5.35	4.45	4.35	5.25	5.00	(*)	(*)	(*)	(*)	(*)
17	5.40	4.35	4.00	5.20	4.80	5.15	4.75	4.45	5.25	4.60
18	......	3.80	......	......	......	5.30	4.55	4.65	5.50	4.70
19	(*)	(*)	(*)	(*)	(*)	5.25	4.50	4.62½	5.25	4.75
20	5.35	5.85	4.65	5.25	4.75	5.25	4.40	4.65	5.50	4.75
21	5.50	4.40	4.50	5.25	4.70	5.25	4.70	4.50	5.40	4.65
22	5.50	4.35	4.45	5.25	4.65	......	4.10	......	5.10	4.60
23	5.40	4.75	......	5.40	4.85	(*)	(*)	(*)	(*)	(*)
24	5.20	4.50	4.40	5.25	4.55	5.00	4.40	4.40	5.60	4.65
25	......	......	......	4.65	4.40	5.30	4.45	4.45	5.70	4.70
26	(*)	(*)	(*)	(*)	(*)	5.15	4.55	5.30	5.50	4.65
27	5.20	4.55	4.35	4.85	4.55	5.30	4.25	4.30	5.50	4.75
28	5.35	4.65	4.20	5.35	4.50	4.95	4.35	4.65	5.40	4.60
29	5.30	4.65	......	5.10	5.00	4.95	......	......	4.80	......
30	5.50	4.45	4.35	5.25	4.65	(*)	(*)	(*)	(*)	(*)
31	5.25	4.30	4.75	5.25	4.90	......	......	......	......	......

Day.	May.					June.				
	Beef steers.	Quarter steers.	Native fed, Texas or Indian.	Stockers.	Feeders.	Beef steers.	Quarter steers.	Native fed, Texas or Indian.	Stockers.	Feeders.
1	$4.80	$4.50	......	$5.25	$4.60	$5.25	$4.90	$4.80	$5.65	$4.80
2	5.00	4.40	$4.55	5.40	4.65	5.30	5.25	......	5.30	4.85
3	5.10	4.60	4.60	5.15	4.70	......	......	......	......	......
4	5.07½	4.25	4.35	5.00	4.60	(*)	(*)	(*)	(*)	(*)
5	5.05	4.60	4.45	5.05	4.70	5.25	4.65	4.75	5.25	4.70
6	......	......	......	......	4.40	5.35	4.75	5.00	5.45	4.75
7	(*)	(*)	(*)	(*)	(*)	5.15	4.85	......	5.05	4.90
8	5.00	4.60	4.80	5.00	4.70	5.15	4.60	4.90	5.35	4.85
9	5.15	4.10	4.80	5.25	4.70	5.00	4.60	4.55	5.15	......
10	5.15	4.60	4.80	5.30	4.80	......	4.25	......	4.25	......
11	5.05	4.60	4.80	5.25	4.77½	(*)	(*)	(*)	(*)	(*)
12	5.15	4.70	......	5.25	4.75	5.15	4.85	......	4.50	4.80
13	......	......	......	......	4.35	5.40	4.40	4.50	5.00	4.80
14	(*)	(*)	(*)	(*)	(*)	5.20	4.40	4.55	5.00	4.70
15	4.85	4.55	......	5.10	4.70	5.25	4.55	4.75	5.20	4.75
16	5.20	4.35	......	5.25	4.70	5.20	4.55	5.05	4.90	4.65
17	5.15	4.75	4.75	5.30	4.85	......	4.25	......	......	......
18	5.30	4.75	......	5.10	4.75	(*)	(*)	(*)	(*)	(*)
19	5.07½	4.80	4.70	5.35	4.75	5.15	4.65	4.85	4.60	4.65
20	......	......	......	4.75	......	5.20	4.35	......	5.10	4.65
21	(*)	(*)	(*)	(*)	(*)	5.45	4.90	......	4.75	4.70
22	5.00	4.70	4.90	5.25	4.65	5.20	4.75	4.90	5.20	4.55
23	5.25	......	4.80	5.45	4.80	5.20	4.60	5.00	4.60	4.75
24	5.25	4.55	4.62½	5.50	5.00	5.10	......	......	3.50	......
25	5.30	5.00	4.70	5.40	4.85	(*)	(*)	(*)	(*)	(*)
26	5.35	4.90	4.75	5.50	4.75	5.20	4.75	5.15	4.85	4.65
27	4.80	......	......	......	......	5.30	4.50	5.15	4.90	4.50
28	(*)	(*)	(*)	(*)	(*)	5.40	4.65	5.10	4.90	4.75
29	5.15	4.85	4.80	5.25	4.85	5.45	4.65	5.00	5.10	4.75
30	5.35	4.70	4.85	5.57½	4.95	5.35	4.60	5.00	5.10	4.55
31	5.35	4.65	5.00	5.50	4.85	......	......	......	......	......

The top prices for native beef steers, native stockers and feeders, and Texas or Indian steers on each commercial day of 1889—Continued.

Day.	July.					August.				
	Beef steers.	Quarter steers.	Native fed, Texas or Indian.	Stockers.	Feeders.	Beef steers.	Quarter steers.	Native fed, Texas or Indian.	Stockers.	Feeders.
1	....	....	....	....	....	$5.70	$4.35	$4.50	$5.00	$4.72½
2	(*)	(*)	(*)	(*)	(*)	5.67½	3.80	4.65	5.00	4.65
3	$5.35	$4.77½	....	$4.90	....	5.80	4.80	3.85	4.90	4.60
4	Hol.	Hol.	Hol.	Hol.	Hol.	5.65	4.30	4.80	4.75	4.45
5	5.50	4.65	....	4.75	$4.70	....	....	4.60	4.00	....
6	5.30	4.00	$5.00	5.00	4.60	(*)	(*)	(*)	(*)	(*)
7	5.60	4.50	....	4.85	4.85	5.65	4.20	4.67½	4.95	4.55
8	5.25	4.35	....	....	....	5.75	4.15	4.30	5.20	4.70
9	(*)	(*)	(*)	(*)	(*)	5.80	3.85	4.85	4.80	4.80
10	5.40	4.55	5.00	4.85	4.25	5.75	4.35	5.00	5.00	4.70
11	5.50	4.40	5.15	4.65	5.35	6.00	4.30	5.00	5.00	4.60
12	5.55	4.70	4.75	4.90	4.75	....	....	....	....	....
13	5.40	4.50	4.70	4.75	4.65	(*)	(*)	(*)	(*)	(*)
14	5.40	4.00	4.25	4.90	4.60	5.85	4.50	5.10	4.70	4.70
15	....	....	....	....	4.45	6.10	4.25	4.80	5.15	4.90
16	(*)	(*)	(*)	(*)	(*)	6.15	4.20	5.00	5.40	5.00
17	5.25	4.50	4.75	4.50	4.60	5.95	4.15	5.00	5.00	5.05
18	5.80	3.80	4.65	4.85	4.75	6.00	3.85	5.40	5.00	4.60
19	5.60	4.35	4.45	4.75	4.70	5.15	....	....	....	....
20	5.45	4.75	4.45	5.00	3.40	(*)	(*)	(*)	(*)	(*)
21	5.50	4.10	4.70	4.75	4.80	5.65	4.00	4.50	4.65	4.65
22	....	....	....	....	....	6.25	4.55	4.10	4.90	4.70
23	(*)	(*)	(*)	(*)	(*)	5.95	4.05	4.27½	5.00	4.55
24	5.50	4.65	4.70	4.80	....	5.90	3.85	....	4.75	4.65
25	5.50	4.40	5.20	4.85	4.70	6.10	3.60	4.50	4.70	4.67½
26	5.70	4.60	4.95	4.85	4.75	....	....	....	4.65	....
27	5.65	4.55	5.50	5.00	4.50	(*)	(*)	(*)	(*)	(*)
28	5.65	4.95	4.60	4.75	4.75	5.90	4.00	4.10	5.10	4.50
29	....	....	....	....	....	6.15	3.25	4.00	5.00	4.60
30	(*)	(*)	(*)	(*)	(*)	6.20	3.80	4.25	4.75	4.45
31	5.30	4.40	4.60	4.50	4.75	6.25	3.80	4.20	4.90	4.45

Day.	September.					October.				
	Beef steers.	Quarter steers.	Other Texas or Indian.	Stockers.	Feeders.	Beef steers.	Quarter steers.	Other Texas or Indian.	Stockers.	Feeders.
1	$6.15	$3.95	$3.95	$4.60	$4.50	(*)	(*)	(*)	(*)	(*)
2	....	....	....	....	....	$5.45	$3.80	$4.10	$4.75	$4.50
3	(*)	(*)	(*)	(*)	(*)	6.30	3.50	4.60	4.75	4.60
4	5.90	3.80	4.60	4.65	4.40	6.20	4.65	4.50	4.60	4.75
5	6.25	3.85	4.30	4.75	4.65	6.00	4.40	4.40	4.50	4.40
6	4.65	3.90	4.55	5.40	4.70	6.15	3.95	4.25	5.25	4.60
7	6.25	3.80	4.70	5.00	4.60	....	....	4.00	3.45	....
8	6.10	3.85	5.65	4.75	4.60	(*)	(*)	(*)	(*)	(*)
9	....	2.90	....	....	....	5.80	4.20	4.50	4.75	4.45
10	(*)	(*)	(*)	(*)	(*)	6.15	3.30	4.60	4.40	4.90
11	5.60	4.00	5.15	4.85	4.50	6.15	3.50	3.75	4.20	4.65
12	6.15	4.00	4.95	5.25	4.90	6.00	3.30	4.60	4.40	4.90
13	6.00	3.60	4.40	4.70	4.75	6.00	3.35	3.40	4.25	4.25
14	5.95	4.10	4.50	5.00	4.60	....	3.00	2.90	4.25	3.85
15	5.80	4.00	5.20	4.40	4.65	(*)	(*)	(*)	(*)	(*)
16	....	....	....	....	....	5.60	3.75	3.45	4.15	4.30
17	(*)	(*)	(*)	(*)	(*)	6.00	3.75	5.15	4.50	4.25
18	6.00	3.90	4.90	4.50	4.50	6.35	3.90	5.05	4.60	4.75
19	6.50	3.90	5.25	5.00	4.70	5.90	3.95	4.75	4.75	4.65
20	6.00	3.85	4.75	4.60	4.75	6.10	3.35	4.20	4.45	4.00
21	6.00	3.55	5.10	5.25	4.70	....	....	....	4.75	....
22	5.75	3.90	5.00	4.50	4.35	(*)	(*)	(*)	(*)	(*)
23	....	....	....	....	....	5.80	3.75	4.25	4.30	4.25
24	(*)	(*)	(*)	(*)	(*)	5.90	3.80	4.47	4.50	4.50
25	5.25	3.95	4.00	4.60	4.50	6.00	3.25	4.50	4.75	4.60
26	6.10	3.75	4.20	4.65	4.50	5.60	4.05	3.85	4.50	4.70
27	6.10	3.82½	4.50	5.00	5.00	5.40	3.65	3.20	4.45	4.65
28	6.00	4.30	4.05	5.00	4.50	....	....	4.00	3.10	4.10
29	5.85	4.00	3.80	4.65	4.60	(*)	(*)	(*)	(*)	(*)
30	....	....	....	....	....	5.40	4.25	4.80	4.40	4.25
31	....	....	....	....	....	6.00	4.30	5.00	4.40	4.50

The top prices for native beef steers, native stockers and feeders, and Texas or Indian steers on each commercial day of 1889—Continued.

Day.	November.					December.				
	Beef steers.	Quarter steers.	Other Texas or Indian.	Stockers.	Feeders.	Beef steers.	Quarter steers.	Other Texas or Indian.	Stockers.	Feeders.
1	$5.85	$3.75	$4.55	$4.50	$4.50	$5.95	....	$4.65	$4.50	$3.90
2	5.75	3.80	4.00	4.75	4.30	....	....	....	4.60	....
3	5.60	3.55	4.30	4.35	4.65	(*)	(*)	(*)	(*)	(*)
4	....	....	....	....	3.75	5.85	$4.50	5.10	4.35	4.60
5	(*)	(*)	(*)	(*)	(*)	6.00	4.40	5.00	4.45	4.75
6	5.90	4.30	4.70	4.40	4.25	6.10	4.35	4.45	4.85	4.50
7	5.75	4.55	5.15	4.40	4.40	6.15	4.25	4.35	4.60	4.60
8	6.00	4.50	4.95	4.50	4.60	6.00	4.25	....	5.10	4.60
9	5.70	4.45	5.05	4.25	3.55	....	....	....	....	....
10	5.55	4.50	5.20	4.60	4.15	(*)	(*)	(*)	(*)	(*)
11	....	....	3.40	....	....	[1]6.80	4.50	4.80	4.75	4.80
12	(*)	(*)	(*)	(*)	(*)	[1]6.40	4.40	4.90	4.60	4.65
13	5.60	4.70	4.75	4.35	4.60	5.80	4.25	4.35	5.00	4.70
14	5.75	4.20	4.90	4.80	4.45	6.10	....	4.70	4.60	4.90
15	5.55	4.00	5.00	4.35	4.40	6.10	3.40	....	4.50	4.75
16	5.70	4.32½	4.00	5.00	5.10	....	4.00	....	4.50	4.30
17	6.10	4.15	5.55	4.60	4.90	(*)	(*)	(*)	(*)	(*)
18	....	3.25	....	....	....	5.12½	4.25	4.65	4.40	4.55
19	(*)	(*)	(*)	(*)	(*)	5.75	3.90	4.40	4.75	4.50
20	5.65	4.25	4.80	4.45	4.50	6.00	6.00	....	4.90	4.50
21	6.05	4.35	4.85	4.60	4.45	5.80	4.15	4.80	4.60	4.55
22	5.80	4.30	5.35	4.60	4.70	6.10	3.95	....	4.00	4.60
23	5.60	3.25	5.15	5.00	4.62½	....	....	....	3.90	4.35
24	6.00	4.05	4.65	5.15	4.75	(*)	(*)	(*)	(*)	(*)
25	....	3.25	....	....	....	Hol.	Hol.	Hol.	Hol.	Hol.
26	(*)	(*)	(*)	(*)	(*)	6.15	....	4.70	5.00	4.40
27	5.35	4.20	4.00	4.60	4.50	5.85	4.40	5.15	5.00	4.70
28	6.10	4.15	4.40	4.75	5.05	5.85	3.80	4.50	5.00	4.70
29	6.00	4.30	4.25	4.65	4.75	5.85	4.85	5.00	4.75	4.70
30	5.95	....	3.95	4.50	....	....	....	....	....	....
31	....	....	....	....	....	(*)	(*)	(*)	(*)	(*)

[1] Not including bunches of 1 and 2 head, at $7.50 to $8.

27. CATTLE LOANS IN THE SOUTHWEST.

The availability of cash capital in marketing a farm product has always been a problem for American distributers. Here the scale of marketing has been so great that immense sums of capital are required, especially in the season when the herds are put on the market. Whence is this capital to come and how is its return to be secured to those who make advances of it to the trade?

In beef-cattle marketing the following from the Drovers' Telegram, of Kansas City, describes the methods of financiering the cattle movement from farm to market, and the influence of capital on prices. The article ably illustrates the economic services of bankers and dealers to production by furnishing abundant supplies of money to take the supply of stock at good prices and by seeing that capital thus available is not scared away by going into the hands of a too speculative class of traders.

"In the early history of the Western cattle business the owners used a small supply of borrowed money compared with the vast sums now used. Local or near-by banks furnished the bulk of this limited amount, and personal security was usually offered by the borrowers. To use banking parlance, it was 'two and three name paper.' As long as this kind of loans was the prevalent kind, there was small chance for doing a large volume of borrowing and lending. Rates of interest were held at the highest notch, and late in the seventies and early in the eighties ranged from 12 to 18 per cent, as to State, locality, or borrower. Local country banks furnished the bulk of the funds. In those days commission men were too few in number and too feeble financially, as a rule, to be of any material assistance to cattlemen needing funds. Borrowers began applying early in the eighties to the commission men for money and the commission men began to respond. This brought about two new developments: First, a much larger amount of capital was brought into the commission business—larger than was necessary to do an old-fashioned commission business and large enough to accommodate needy cattlemen; second, chattel mortgages were used for security, thus abandoning the two and three name paper.

"The new system proved highly successful, and early in the nineties it was certain that it had come to stay. Losses were very small, and money lenders were anxious for this style of investments or loans. The capital used by the commission men was only a drop in the bucket of the money so used in 1890 to 1892, and when in 1893 the ruinous panic began, Kansas City cattle paper was scattered over the entire country from Kansas City to Boston. During the panic cattle paper was readily converted into cash, and proved to be the best paper held by banks, which were besieged by anxious depositors for their deposits. When the panic closed it was found that losses on cattle paper were insignificant, and it came out with flying colors.

"Since 1893 the cattle loans have increased enormously by leaps and bounds; commission houses have increased their capital in order to furnish more funds to their customers; loan companies have been organized with as high as half a million dollars capital to furnish funds to cattlemen exclusively; financiers have opened offices at the stock yards to deal as brokers in cattle paper, and since easy money set in, following the election of 1896, a heavy supply of money has been offered the cattlemen of the West and Southwest through the Kansas City commission men.

"At the present time the volume of cattle paper placed, handled, and collected at Kansas City is tremendous. Recent investigations have led to the belief that the amount of money in use at Kansas City for cattle paper is in the region of $40,000,000. This is kept constantly in use, and indicates that $80,000,000 of cattle paper is made annually at Kansas City.

"The large demand for this paper is based mainly on the chattel mortgage or on the cattle themselves, to which is added the names of the owner and the indorser, and the security thus offered is vastly better than that of the old two and three name paper. Lower interest rates have followed, and the old 12 and 18 per cent rates are a thing of the past. Ten per cent is now the most common rate, and lower figures could be had on gilt-edged paper before the recent stringency set in.

"Two results can be easily traced to the heavy supply of money now offered to and used by the Western cattlemen: First, the great activity of young cattle over the entire West; second, the higher scale of prices current."

28. INSPECTION AND CHARGES AT KANSAS CITY STOCK YARDS.

Sheep coming to the yards must be dipped before they can be returned to the country as stockers.

The charges for selling live stock on the Kansas City market are as follows: Cattle, 50 cents per head for cattle of all ages. In carloads of 24 or more, not more than $12 per carload. Calves, $10 per single-deck carload and $18 per double-deck carload of veal calves. Hogs, $6 per carload for single-deck carload of hogs containing 35 or more head and $10 for double-deck carloads. Sheep, same as for hogs, without respect to numbers. Mixed carloads, 50 cents per head for cattle and 25 cents per head for calves and 10 cents per head for hogs and sheep, but not to exceed $12 per carload. Drive-ins, 50 cents per head for cattle and 25 cents per head for calves and 10 cents per head for hogs and sheep, for 60 head or less; more than that number shall be charged for at carload rates. Charges for buying: Cattle, 50 cents per head for stockers and feeders, but not to exceed $12 per carload. When purchases are driven out the rule contemplates charging 50 cents per head for steers, no matter how great the number. Six dollars for single deck and $10 for double deck for sheep. Hogs, not less than $4 for single deck and $5 for double deck for live hogs, and not less than 3 cents per head for hogs bought by the head.

Charges for yardage are 25 cents per head for cattle, 6 cents for hogs, and 5 cents for sheep. Hay, 80 cents per 100 pounds; corn, 60 cents per bushel; and oats, 60 cents per bushel.

29. COST OF MARKETING LIVE STOCK AT CINCINNATI.

Cincinnati, once the pioneer in pork packing, has long since been outstripped by other cities where this industry has developed more rapidly. Nevertheless this city is still a representative market for the entire Ohio River Basin. It enters into competition with Chicago, St. Louis, Indianapolis, and a dozen other packing centers in Ohio, Indiana, and Illinois. It furthermore affords a convenient terminal market for the live-stock product south of the Ohio. Altogether its commercially tributary territory, as a farmer's market for live stock, comprises the greater portion of 6 States—Ohio, Indiana, Illinois, West Virginia, Kentucky, and Tennessee.

Its principal rôle in distribution of live stock is as a market for live hogs partly for eastward shipment, but mainly for local packing purposes. The relative rank of these two demands is indicated by the figures of receipts and shipments.

Receipts and shipments of hogs at Cincinnati.

[From Cincinnati Chamber of Commerce Report.]

Year.	Receipts.	Shipments.
1896-97	1,653,256	1,056,500
1897-98	1,467,854	785,172
1898-99	1,381,721	689,114

One of the features of this market is the shorter distances by which the terminal market may be reached by rail and water. Another is the absence of packing houses of such size as to dominate the market.

The Cincinnati live-stock market represents the type of terminal market in which the commission system prevails with competition among its representative houses. To these features of the market must be attributed the low percentage of cost to the producer in getting his live stock to market. The following schedule shows what proportion of the consumer's cost goes to the producer and to the distributers for four classes of live stock—cattle, hogs, lambs, and calves. In this respect of low proportion of cost of marketing Cincinnati partakes of the nature of a local market which, when competitive with distant markets, is always the best one for the producer:

Expenses of marketing live stock at Cincinnati.[1]

Year and month of sale.	Kind and grade of product.	Consumer paid, per 100 pounds.	Producer received, per 100 pounds.	Combined expenses of distribution per 100 pounds between producer and consumer.	Percentage of consumer's price to—	
					Distributers.	Producers.
April, 1900	Butcher cattle	$4.60	$4.25	$0.35	7.6	92.4
May, 1900	do	4.91	4.33	.58	11.8	88.2
June, 1900	Packing hogs	5.10	4.75	.35	6.8	93.2
March, 1900	do	4.95	4.50	.45	9	91
June, 1900	Butcher lambs	7.00	5.25	1.75	25	75
May, 1900	do	7.50	5.50	2.00	26.6	73.4
Do	Veal calves	7.50	6.00	1.50	20	80

[1] Reported by Mr. Joseph D. Morton, special agent.

Freight rates from some principal shipping points to Cincinnati.[1]

Article.	From—	Railroad.	Freight rate per 100 pounds.
			Cents.
Butcher cattle	Owensboro, Ky	Louisa, Henderson and St. Louis	17½
Do	Chattanooga, Tenn	Cincinnati Southern	22
Packing hogs	Evansville, Ind	Evansville and Terre Haute and Baltimore and Ohio Southwestern.	15
Do	Rushville, Ind	Cincinnati, Hamilton and Dayton	8½
Butcher lambs	Nicholasville, Ky	Cincinnati Southern	13
Do	Nashville, Tenn	Louisville and Nashville	30
Veal calves	Mantua, Ohio	Erie	13

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[1] Reported by Mr. Joseph D. Morton, special agent.

30. THE HOG MARKETS OF THE MISSISSIPPI VALLEY.

Next to beef cattle, hogs are the most important feature in live-stock distribution between producer and consumer. This phase of the movement is far less local than the cattle trade. Throughout the entire Mississippi Valley there are at least 75 centers of consumption of live hogs for packing purposes. The distribution both of production and consumption is thus far more general.

Chicago has for so long been the world's greatest center for the pork-packing industry that the facts as to consumption at that point are given for the period from 1854 down to 1899. These figures, compared with the total consumption at the rest of the Western packing centers, indicate the relative importance of that market for this period.

Pork packing in the West and at Chicago.[1]

Year ending Mar. 1—	In Chicago.	In the West.	Year ending Mar. 1—	In Chicago.	In the West.
1854	52,849	2,534,770	1877	2,933,486	7,376,858
1855	73,694	2,124,404	1878	4,009,311	9,045,566
1856	80,380	2,489,502	1879	4,960,959	10,853,693
1857	74,000	1,818,468	1880	4,680,637	10,997,399
1858	99,262	2,210,778	1881	5,752,191	12,238,354
1859	179,684	2,465,552	1882	5,100,484	10,551,449
1860	151,339	2,350,822	1883	4,222,780	9,340,999
1861	271,805	2,155,702	1884	3,911,792	9,183,100
1862	505,691	2,893,666	1885	4,228,205	10,519,108
1863	970,264	4,069,520	1886	4,928,730	11,263,567
1864	904,659	3,261,105	1887	4,425,941	12,083,012
1865	760,514	2,422,779	1888	3,732,244	11,532,707
1866	507,355	1,785,955	1889	3,218,415	10,798,974
1867	639,332	2,490,791	1890	4,473,467	13,545,303
1868	796,226	2,781,084	1891	6,071,659	17,713,134
1869	597,954	2,499,173	1892	5,249,798	14,457,614
1870	688,149	2,595,243	1893	4,352,095	12,390,630
1871	919,197	3,832,084	1894	4,219,567	11,605,006
1872	1,225,236	5,125,560	1895	5,293,202	16,003,645
1873	1,456,650	5,956,254	1896	5,490,410	15,010,635
1874	1,826,560	6,525,616	1897	5,967,595	16,928,978
1875	2,136,716	6,761,670	1898	6,747,265	20,201,260
1876	2,320,846	6,150,342	1899	8,016,675	23,651,695

[1] Forty-second Report, Chicago Board of Trade, 1899, p. 45.

The distribution of live hogs is almost wholly a domestic movement. Outside of the Mississippi Valley there are several leading cities at which they are marketed and packed on a considerable scale, but comparatively few are exported. Boston, for instance, received and packed 1,737,000 for the year ending March 1, 1899. This gave that city the fourth rank as an American live-hog market. Buffalo received 447,000 and other Eastern places 185,000. Of the 30,000,000 hogs received at about as many markets East and West, three other seaboard points, New York, Philadelphia, and Baltimore, received and packed 2,978,000, or about 10 per cent. With Boston these four seaboard points received over 15 per cent of the annual pack. Of these receipts at seaboard of 4,735,000, only 14,579 were exported.[1]

The following table shows the leading markets, their relative importance, and the number of hogs packed in the season from November 1 to March 1. It indicates how widely this industry is diffused throughout the interior of the country.

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[1] World Almanac, 1900, p. 192, and Bulletin No. 16, Distribution of Agricultural Products, p. 96.

Pork packing in the Mississippi Valley.[1]

Places where packed.	1897-98.	1896-97.	1895-96.	1894-95.	1893-94.	1892-93.
ILLINOIS.						
Chicago	2,672,730	2,283,375	2,375,470	2,475,468	1,695,980	1,478,212
Quincy	37,500	31,060	31,524	23,567	21,706	15,517
Galena				3,000		
Barry			2,512			
Peoria	9,931	42,625	32,849	25,447	28,282	22,320
Bloomington	32,848	27,798	23,445	31,707	8,444	7,433
Other points	15,839	13,161	15,662	16,196	11,546	3,810
Total	2,768,848	2,398,019	2,481,462	2,575,385	1,765,958	1,527,292
MISSOURI.						
Kansas City	1,305,131	1,022,639	869,273	884,652	584,543	616,752
St. Louis	526,440	412,558	387,697	373,165	255,084	226,206
St. Joseph	178,500	76,100	80,500	140,106	111,000	100,000
Other points	5,398	3,807	5,125	5,314	4,680	3,891
Total	2,015,469	1,515,104	1,342,595	1,403,237	955,307	946,849
IOWA.						
Cedar Rapids	190,569	220,130	142,105	159,202	122,824	102,751
Marshalltown	51,726	53,712	32,282	39,016	22,300	9,689
Sioux City	125,400	95,000	95,000	142,000	96,618	163,473
Des Moines		60,525	62,720	50,010	44,000	25,089
Ottumwa	246,146	213,600	137,815	161,000	103,000	87,307
Keokuk	60,242	49,807	49,420	59,022	44,590	31,861
Sabula			1,000	2,000		1,500
Oskaloosa						
Davenport	17,400	21,000	23,750	46,300	10,000	4,000
Iowa City						4,989
Other points	21,565	3,500	70,460	73,229	48,269	21,000
Total	713,048	717,274	614,552	731,779	491,601	451,659
OHIO.						
Cincinnati	276,120	240,160	249,640	265,735	189,908	204,410
Cleveland	201,405	215,800	186,752	186,890	124,386	150,417
Toledo	3,500	3,000	5,000	3,500	4,500	5,560
Circleville			3,046	5,237	2,658	437
Dayton	15,000	12,000	15,000	15,000	12,000	10,000
Other points	12,000	9,000	14,000	20,013	10,550	14,500
Total	508,325	479,960	473,438	496,375	344,002	385,324
INDIANA.						
Indianapolis	428,462	345,913	336,492	307,610	257,724	204,553
Fort Wayne	9,500	5,000	16,600	12,000	5,000	4,000
Evansville	7,300	11,072	11,018	8,345	12,012	8,519
Logansport	8,000	3,700				
Other points	6,700	10,650	14,350	14,500	9,500	11,882
Total	459,962	376,335	378,460	342,455	284,236	228,954
WISCONSIN.						
Milwaukee	239,191	159,460	178,229	160,477	21,286	119,500
Cudahy	268,883	201,740	189,352	188,363	121,337	
La Crosse	7,500	4,500	12,500	13,050	8,113	12,231
Other points	28,372	16,737	22,923	31,053	17,358	16,014
Total	543,946	382,437	403,004	392,943	168,094	147,745
NEBRASKA.						
Omaha	550,175	441,008	417,093	534,834	379,559	408,080
Nebraska City	85,552	38,306	73,792	71,320	30,182	42,000
Lincoln	19,641	16,700	31,960	29,500	27,000	21,205
Other points						
Total	655,368	496,014	522,845	635,654	436,741	471,285
KENTUCKY.						
Louisville	177,268	119,640	128,537	136,898	103,797	112,003
Other points	4,000	3,200	3,700	3,200	3,100	3,070
Total	181,268	122,840	132,237	140,098	106,897	115,073

[1] From Report of Chicago Board of Trade, 1899, pp. 52-53, quoting the Cincinnati Price Current.

Pork packing in the Mississippi Valley—Continued.

Places where packed.	1897-98.	1896-97.	1895-96.	1894-95.	1893-94.	1892-93.
MICHIGAN.						
Detroit	115,500	94,859	89,386	71,950	51,525	65,246
Other points	4,500	9,200	19,750	25,070	21,417	12,865
Total	120,000	104,059	109,136	97,020	72,942	78,111
MINNESOTA.						
St. Paul	128,110	90,363	147,921	189,950	118,729	106,131
Other points	37,200	4,000	11,200	16,000	4,600	23,850
Total	165,310	94,363	159,121	205,950	123,329	129,981
KANSAS.						
Topeka	17,491	14,212	10,150	....	....	....
Wichita	65,000	50,000	31,000	25,000	....	36,715
Other points	5,000	2,000	5,500	5,000	26,710	35,532
Total	87,491	66,212	46,650	30,000	26,710	72,247
TENNESSEE.						
Nashville	54,330	50,797	18,000	44,624	28,265	....
Other points	18,500	14,000	13,300	10,000	4,000	4,000
Total	72,830	64,797	61,300	54,624	32,265	4,000
MISCELLANEOUS.						
Pittsburg, Pa	68,000	58,000	67,000	61,000	36,000	40,000
Wheeling, W. Va	....	....	....	....	10,000	10,000
Other points	80,920	73,676	24,000	25,000	30,000	25,000
Total	148,920	131,676	91,000	86,000	76,000	75,000

RECAPITULATION.

Illinois	2,768,848	2,398,019	2,481,462	2,575,385	1,765,958	1,527,292
Missouri	2,015,469	1,515,104	1,342,595	1,403,237	955,307	946,849
Iowa	713,048	717,274	614,552	731,779	491,601	451,650
Ohio	508,325	479,960	473,438	496,375	344,002	385,324
Indiana	459,962	376,335	378,460	342,455	284,236	228,954
Wisconsin	543,946	382,437	403,004	392,943	168,094	147,745
Nebraska	655,368	496,014	522,845	635,654	436,741	471,285
Kentucky	181,268	122,840	132,237	140,098	106,897	115,073
Michigan	120,000	104,059	109,136	97,020	72,942	78,111
Minnesota	165,310	94,363	159,121	205,950	123,329	129,981
Kansas	87,491	66,212	46,650	30,000	26,710	72,247
Tennessee	72,830	64,797	61,300	54,624	32,265	4,000
Pennsylvania	68,000	58,000	67,000	61,000	36,000	40,000
West Virginia and other points	80,920	73,676	24,000	25,000	40,000	35,000
Total	8,440,785	6,949,090	6,815,800	7,191,520	4,884,082	4,633,520

NOTE.—The total number of hogs packed in the West during the winter season of 1897-98 was 8,440,785, and the cost of hogs per 100 pounds for that season $3.63.

The total number of hogs packed in the West during the summer season, from March 1 to November 1, 1897, was 11,760,475, as against 9,979,888 for the corresponding time in 1896.

The average weight per live hog of the packing during the winter season of 1897-98 was 235.35 pounds, and the total pounds of hogs for that season 1,986,580,000.

31. HOG PRICES AT KANSAS CITY IN 1898 AND 1899.[1]

The top prices for hogs, and the bulk of sales made at Kansas City on each commercial day of 1899 and 1898.

[The appended tables show the top prices and bulk of the hog sales made at Kansas City on each day of 1899 and 1898. The asterisk (*) is inserted for Sunday.]

Day.	January.				February.			
	1899.		1898.		1899.		1898.	
	Bulk.	Tops.	Bulk.	Tops.	Bulk.	Tops.	Bulk.	Tops.
1	(*)	(*)	$3.45-$3.52½	$3.60	$3.55-$3.70	$3.77½	$3.60-$3.75	$3.80
2	$3.45-$3.70	$3.75	(*)	(*)	3.55-3.75	3.85	3.60-3.75	3.85
3	3.45-3.65	3.75	3.45-3.55	3.65	3.55-3.75	3.85	3.55-3.70	3.80
4	3.40-3.60	3.75	3.35-3.47½	3.60	3.50-3.70	3.75	3.65-3.80	3.90
5	3.35-3.60	3.70	3.35-3.45	3.50	(*)	(*)	3.65-3.80	3.95
6	3.45-3.60	3.72½	3.35-3.45	3.60	3.45-3.65	3.75	(*)	(*)
7	3.35-3.57½	3.62½	3.35-3.45	3.55	3.60-3.75	3.77½	3.70-3.82½	3.95
8	(*)	(*)	3.40-3.50	3.62½	3.60-3.72½	3.85	3.65-3.80	3.90
9	3.40-3.60	3.65	(*)	(*)	3.65-3.75	3.85	3.65-3.80	3.90
10	3.45-3.65	3.75	3.35-3.50	3.60	3.65-3.80	3.87½	3.75-3.90	3.97½
11	3.45-3.65	3.77½	3.35-3.50	3.60	3.55-3.75	3.80	3.70-3.90	4.00
12	3.45-3.70	3.75	3.45-3.55	3.60	(*)	(*)	3.75-3.90	3.95
13	3.40-3.62½	3.75	3.45-3.60	3.67½	3.55-3.75	3.85	(*)	(*)
14	3.45-3.52½	3.70	3.45-3.60	3.62½	3.55-3.70	3.80	3.75-3.90	4.00
15	(*)	(*)	3.45-3.60	3.62½	3.55-3.70	3.80	3.85-4.00	4.07½
16	3.45-3.65	3.70	(*)	(*)	3.55-3.70	3.82½	3.80-4.00	4.05
17	3.40-3.57½	3.65	3.45-3.60	3.65	3.55-3.75	3.85	3.80-3.90	4.05
18	3.40-3.60	3.70	3.50-3.60	3.65	3.55-3.70	3.75	3.75-3.95	4.05
19	3.45-3.65	3.77½	3.45-3.60	3.65	(*)	(*)	3.80-3.95	4.10
20	3.45-3.60	3.70	3.40-3.60	3.65	3.50-3.60	3.65	(*)	(*)
21	3.55-3.65	3.70	3.50-3.62½	3.70	3.45-3.60	3.70	3.85-4.00	4.20
22	(*)	(*)	3.60-3.70	3.75	3.45-3.60	3.72½	3.75-3.95	4.07½
23	3.50-3.65	3.75	(*)	(*)	3.45-3.65	3.80	3.75-3.90	4.05
24	3.45-3.65	3.75	3.65-3.75	3.80	3.55-3.75	3.85	3.70-3.95	4.07½
25	3.50-3.70	3.77½	3.65-3.80	3.87½	3.65-3.75	3.82½	3.70-3.95	4.10
26	3.50-3.70	3.77½	3.65-3.80	3.90	(*)	(*)	3.75-4.00	4.02½
27	3.55-3.75	3.82½	3.65-3.75	3.85	3.60-3.70	3.77½	(*)	(*)
28	3.60-3.75	3.90	3.60-3.70	3.80	3.50-3.65	3.75	3.75-3.90	4.00
29	(*)	(*)	3.60-3.70	3.80				
30	3.65-3.80	3.85	(*)	(*)				
31	3.60-3.70	3.85	3.60-3.75	3.80				

Day.	March.				April.			
	1899.		1898.		1899.		1898.	
	Bulk.	Tops.	Bulk.	Tops.	Bulk.	Tops.	Bulk.	Tops.
1	$3.45-$3.60	$3.75	$3.65-$3.85	$4.05	$3.60-$3.70	$3.80	$3.55-$3.70	$3.77½
2	3.50-3.65	3.75	3.70-3.95	4.10	(*)	(*)	3.60-3.70	3.75
3	3.50-3.65	3.75	3.75-4.00	4.15	3.60-3.70	3.80	(*)	(*)
4	3.50-3.60	3.70	3.80-3.95	4.05	3.60-3.75	3.82½	3.62½-3.75	3.80
5	(*)	(*)	3.80-3.90	4.05	3.65-3.75	3.85	3.65-3.80	3.90
6	3.50-3.60	3.70	(*)	(*)	3.60-3.75	3.80	3.60-3.75	3.90
7	3.55-3.70	3.77½	3.75-3.95	4.02½	3.60-3.70	3.80	3.60-3.75	3.87½
8	3.55-3.75	3.82½	3.65-3.85	3.90	3.65-3.70	3.85	3.60-3.75	3.87½
9	3.55-3.67½	3.80	3.65-3.85	3.95	(*)	(*)	3.60-3.75	3.90
10	3.55-3.70	3.85	3.65-3.85	3.95	3.62½-3.75	3.82½	(*)	(*)
11	3.60-3.70	3.80	3.70-3.90	4.00	3.55-3.70	3.80	3.55-3.70	3.77½
12	(*)	(*)	3.70-3.87½	3.95	3.50-3.65	3.75	3.55-3.72½	3.85
13	3.60-3.75	3.75	(*)	(*)	3.50-3.62½	3.75	3.55-3.72½	3.80
14	3.60-3.75	3.80	3.65-3.80	3.90	3.57½-3.70	3.85	3.60-3.75	3.90
15	3.55-3.70	3.75	3.65-3.80	3.90	3.60-3.75	3.82½	3.60-3.80	3.90
16	3.60-3.72½	3.80	3.60-3.80	3.95	(*)	(*)	3.60-3.75	3.85
17	3.60-3.72½	3.80	3.60-3.77½	3.90	3.65-3.80	3.80	(*)	(*)
18	3.55-3.70	3.75	3.65-3.80	4.00	3.60-3.75	3.82½	3.60-3.70	3.80
19	(*)	(*)	3.70-3.80	3.90	3.62½-3.75	3.85	3.55-3.75	3.82½
20	3.55-3.65	3.72½	(*)	(*)	3.70-3.80	3.90	3.55-3.70	3.80
21	3.50-3.65	3.75	3.70-3.85	3.87½	3.70-3.80	3.87½	3.65-3.80	3.90
22	3.55-3.70	3.77½	3.70-3.85	3.90	3.70-3.80	3.82½	3.70-3.90	4.00
23	3.50-3.70	3.77½	3.65-3.80	3.90	(*)	(*)	3.65-3.80	3.95
24	3.50-3.65	3.80	3.60-3.75	3.85	3.65-3.75	3.85	(*)	(*)
25	3.55-3.65	3.72½	3.60-3.70	3.85	3.65-3.75	3.80	3.65-3.80	3.85
26	(*)	(*)	3.60-3.70	3.80	3.65-3.75	3.82½	3.65-3.85	3.90
27	3.50-3.70	3.75	(*)	(*)	3.65-3.75	3.85	3.70-3.85	4.00
28	3.50-3.75	3.82½	3.50-3.60	3.65	3.62½-3.75	3.85	3.70-3.85	4.00
29	3.55-3.70	3.75	3.50-3.65	3.72½	3.65-3.80	3.92½	3.70-3.85	4.00
30	3.50-3.65	3.85	3.50-3.60	3.70	(*)	(*)	3.75-3.90	4.00
31	3.55-3.65	3.75	3.55-3.65	3.75				

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[1] From Drovers' Daily Telegram.

The top prices for hogs, and the bulk of sales made at Kansas City on each commercial day of 1899 and 1898—Continued.

Day.	May.				June.			
	1899.		1898.		1899.		1898.	
	Bulk.	Tops.	Bulk.	Tops.	Bulk.	Tops.	Bulk.	Tops.
1	$3.55 -$3.70	$3.75	(*)	(*)	$3.50 -$3.60	$3.70	$4.00 -$4.25	$4.35
2	3.55 - 3.75	3.80	$3.75 -$3.95	$4.05	3.55 - 3.70	3.75	3.90 - 4.10	4.20
3	3.60 - 3.75	3.80	3.75 - 4.00	4.10	3.55 - 3.75	3.75	3.80 - 4.00	4.10
4	3.57½- 3.70	3.85	3.80 - 4.00	4.10	(*)	(*)	3.90 - 4.05	4.12½
5	3.60 - 3.72½	3.82½	3.80 - 4.00	4.10	3.55 - 3.70	3.75	(*)	(*)
6	3.65 - 3.77½	3.82½	3.85 - 4.00	4.10	3.60 - 3.70	3.80	3.80 - 4.05	4.05
7	(*)	(*)	3.85 - 3.95	4.15	3.60 - 3.75	3.80	3.75 - 3.92½	4.05
8	3.65 - 3.82½	3.85	(*)	(*)	3.57½- 3.65	3.75	3.75 - 4.00	4.05
9	3.60 - 3.70	3.80	3.80 - 3.95	4.10	3.60 - 3.70	3.80	3.85 - 4.05	4.15
10	3.60 - 3.70	3.85	3.80 - 3.95	4.10	3.60 - 3.70	3.72½	3.80 - 4.10	4.15
11	3.60 - 3.70	3.75	3.85 - 4.05	4.17½	(*)	(*)	3.70 - 3.90	3.95
12	3.60 - 3.70	3.75	4.00 - 4.35	4.50	3.55 - 3.70	3.72½	(*)	(*)
13	3.62½- 3.70	3.80	4.25 - 4.45	4.55	3.60 - 3.70	3.75	3.65 - 3.85	3.92½
14	(*)	(*)	4.00 - 4.35	4.40	3.67½- 3.77½	3.82½	3.65 - 3.85	3.97½
15	3,60 - 3.75	3.80	(*)	(*)	3.70 - 3.80	3.85	3.65 - 3.85	3.92½
16	3.60 - 3.70	3.77½	4.15 - 4.40	4.45	3.70 - 3.77½	3.85	3.80 - 3.95	4.05
17	3.60 - 3.70	3.75	4.35 - 4.55	4.65	3.65 - 3.75	3.80	3.70 - 3.95	4.00
18	3.57½- 3.72½	3.80	4.20 - 4.40	4.55	(*)	(*)	3.65 - 3.90	4.00
19	3.62½- 3.75	3.82½	4.10 - 4.50	4.60	3.65 - 3.72½	3.80	(*)	(*)
20	3.62½- 3.75	3.82½	4.00 - 4.30	4.40	3.60 - 3.65	3.72½	3.75 - 3.90	4.00
21	(*)	(*)	4.05 - 4.25	4.40	3.70 - 3.80	3.85	3.75 - 3.95	4.05
22	3.60 - 3.75	3.80	(*)	(*)	3.70 - 3.77½	3,85	3.65 - 3.85	3.97½
23	3.60 - 3.75	3.85	4.20 - 4.50	4.50	3.65 - 3.72½	3.82½	3.70 - 3.90	3.97½
24	3.60 - 3.75	3.80	4.10 - 4.40	4.45	3.62½- 3.75	3.75	3.65 - 3.90	4.00
25	3.55 - 3.67½	3.77½	4.00 - 4.25	4.32½	(*)	(*)	3.70 - 3.95	3.95
26	3.55 - 3.70	3.75	4.10 - 4.30	4.40	3.65 - 3.72½	3.75	(*)	(*)
27	3.60 - 3.67½	3.75	4.10 - 4.35	4.45	3.65 - 3.75	3.80	3.65 - 3.85	3.95
28	(*)	(*)	3.90 - 4.25	4.27½	3.67½- 3.80	3.82½	3.60 - 3.75	3.85
29	3.60 - 3.70	3.75	(*)	(*)	3.70 - 3.80	3.87½	3.55 - 3.70	3.80
30	3.57½- 3.70	3.77½	3.90 - 4.25	4.27½	3.70 - 3.82½	3.90	3.45 - 3.70	3.75
31	3.55 - 3.65	3.80	4.00 - 4.30	4.35	....	....	....	....

Day.	July.				August.			
	1899.		1898.		1899.		1898.	
	Bulk.	Tops.	Bulk.	Tops.	Bulk.	Tops.	Bulk.	Tops.
1	$3.75 -$3.85	$3.92½	$3.50 -$3.70	$3.80	$4.22½-$1.27½	$4.42½	$3.70 -$3.90	$3.92½
2	(*)	(*)	3.50 - 3.65	3.80	4.25 - 4.27½	1.37½	3.65 - 3.80	3.90
3	3.80 - 3.95	3.97½	(*)	(*)	4.32½- 4.35	4.42½	3.55 - 3.75	3.80
4	Holiday.	H'day.	Holiday.	H'day.	4.42½- 4.47½	4.55	3.55 - 3.75	3.80
5	3.85 - 4.00	4.00	3.60 - 3.80	3.87½	4.50 - 4.55	4.60	3.60 - 3.85	3.85
6	3.85 - 4.00	4.05	3.60 - 3.85	3.90	(*)	(*)	3.65 - 3.85	3.90
7	3.85 - 3.97½	4.02½	3.70 - 3.95	4.00	4.45 - 4.50	4.52½	(*)	(*)
8	3.85 - 4.00	4.05	3.75 - 4.00	4.10	4.40 - 4.50	4.55	3.65 - 3.95	4.00
9	(*)	(*)	3.65 - 4.90	3.97½	4.35 - 4.55	4.60	3.55 - 3.85	3.90
10	3.90 - 4.02½	4.05	(*)	(*)	4.35 - 4.55	4.62½	3.55 - 3.80	3.82½
11	3.97½- 4.10	4.15	3.60 - 3.85	3.90	4.30 - 4.50	4.57½	3.65 - 3.85	3.95
12	4.05 - 4.15	4.25	3.60 - 3.85	3.95	4.35 - 4.55	4.60	3.80 - 3.95	4.10
13	4.10 - 4.25	4.30	3.70 - 3.95	1.05	(*)	(*)	3.75 - ?.90	3.97½
14	4.10 - 4.25	4.35	3.70 - 3.90	4.00	4.45 - 4.55	4.65	(*)	(*)
15	1.10 - 4.17½	4.22½	3.75 - 3.95	1.05	4.50 - 4.70	4.75	3.65 - 3.85	3.90
16	(*)	(*)	3.80 - 4.00	4.00	4.37½- 4.70	4.75	3.65 - 3.85	3.90
17	4.10 - 4.20	4.25	(*)	(*)	4.35 - 4.65	4.72½	3.70 - 3.85	3.95
18	4.20 - 4.30	4.37½	3.75 - 3.95	4.00	4.45 - 4.70	4.75	3.65 - 3.75	3.85
19	4.32½- 4.40	4.45	3.80 - 4.00	4.05	4.50 - 4.70	4.75	3.60 - 3.72½	3.80
20	4.25 - 4.32½	4.42½	3.75 - 3.90	4.00	(*)	(*)	3.70 - 3.80	3.85
21	4.25 - 4.35	4.40	3.70 - 3.90	4.00	4.50 - 4.60	4.70	(*)	(*)
22	4.35 - 4.45	4.50	3.65 - 3.90	3.95	4.45 - 4.65	4.70	3.70 - 3.77½	3.80
23	(*)	(*)	3.70 - 3.90	4.00	4.50 - 4.65	4.75	3.65 - 3.80	3.85
24	4.47½- 4.50	4.55	(*)	(*)	4.55 - 4.70	4.77½	3.75 - 3.87½	4.00
25	4.40 - 4.50	4.52½	3.75 - 3.95	4.00	4.55 - 4.72½	4.75	3.70 - 3.80	3.90
26	4.30 - 4.35	4.45	3.75 - 3.90	4.00	4.50 - 4.70	4.80	3.70 - 3.80	3.87½
27	4.35 - 4.40	4.42½	3.65 - 3.85	3.95	(*)	(*)	3.70 - 3.85	3.85
28	4.35 - 4.40	4.47½	3.60 - 3.75	3.85	4.50 - 4.70	4.77½	(*)	(*)
29	4.40 - 4.45	4.45	3.65 - 3.85	3.95	4.45 - 4.65	4.75	3.80 - 3.85	3.87½
30	(*)	(*)	3.65 - 3.80	3.90	4.45 - 4.65	4.72½	3.75 - 3.85	3.90
31	4.40 - 4.47½	4.55	(*)	(*)	4.30 - 4.35	4.65	3.70 - 3.80	3.85

The top prices for hogs, and the bulk of sales made at Kansas City on each commercial day of 1899 and 1898—Continued.

Day.	September.				October.			
	1899.		1898.		1899.		1898.	
	Bulk.	Tops.	Bulk.	Tops.	Bulk.	Tops.	Bulk.	Tops.
1	$4.30 -$4.45	$4.55	$3.65 -$3.72½	$3.77½	(*)	(*)	$3.65 -$3.75	$3.77½
2	4.20 - 4.25	4.45	3.70 - 3.80	3.85	$4.42½-$4.60	$1.60	(*)	(*)
3	(*)	(*)	3.75 - 3.80	3.90	4.40 - 4.60	4.65	3.60 - 3.70	3.75
4	4.20 - 4.40	4.45	(*)	(*)	4.37½- 4.60	4.62½	3.60 - 3.65	3.75
5	4.25 - 4.40	4.45	3.75 - 3.80	3.85	4.35 - 4.55	4.60	3.50 - 3.55	3.70
6	4.30 - 4.40	4.50	3.65 - 3.75	3.80	4.35 - 4.60	4.60	3.50 - 3.55	3.65
7	4.35 - 4.40	4.50	3.55 - 3.65	3.72½	4.35 - 4.60	4.60	3.55 - 3.60	3.70
8	4.35 - 4.40	4.50	3.60 - 3.70	3.80	(*)	(*)	3.60 - 3.65	3.70
9	4.35 - 4.40	4.45	3.70 - 3.80	3.85	4.35 - 4.55	4.57½	(*)	(*)
10	(*)	(*)	3.70 - 3.80	3.80	4.30 - 4.50	4.55	3.60 - 3.67½	3.72½
11	4.37½- 4.42½	4.45	(*)	(*)	4.25 - 4.35	4.52½	3.50 - 3.60	3.70
12	4.30 - 4.37½	4.40	3.75 - 3.80	3.85	4.20 - 4.35	4.42½	3.55 - 3.62½	3.75
13	4.30 - 4.37½	4.37½	3.80 - 3.85	3.92½	4.20 - 4.35	4.37½	3.57½- 3.65	3.70
14	4.32½- 4.40	4.42½	3.77½- 3.95	4.00	4.20 - 4.35	4.40	3.55 - 3.65	3.75
15	4.35 - 4.40	4.15	3.70 - 3.85	3.95	(*)	(*)	3.62½- 3.67½	3.75
16	4.35 - 4.40	4.42½	3.65 - 3.75	3.90	4.20 - 4.35	4.35	(*)	(*)
17	(*)	(*)	3.65 - 3.75	3.85	4.15 - 4.30	4.32½	3.65 - 3.70	3.75
18	4.35 - 4.40	4.42½	(*)	(*)	4.12½- 4.20	4.27½	3.65 - 3.70	3.75
19	4.35 - 4.45	4.50	3.75 - 3.80	3.85	4.12½- 4.20	4.25	3.65 - 3.75	3.80
20	4.30 - 4.47½	4.50	3.65 - 3.75	3.80	4.12½- 4.20	4.30	3.62½- 3.70	3.80
21	4.30 - 4.50	4.55	3.65 - 3.75	3.80	4.15 - 4.17½	4.20	3.60 - 3.70	3.75
22	4.35 - 4.50	4.60	3.65 - 3.75	3.80	(*)	(*)	3.55 - 3.60	3.65
23	4.35 - 4.50	4.55	3.70 - 3.80	3.85	1.12½- 4.17½	4.20	(*)	(*)
24	(*)	(*)	3.75 - 3.82½	3.85	4.07½- 4.12½	4.15	3.50 - 3.57½	3.60
25	4.42½- 4.60	4.60	(*)	(*)	4.10 - 4.12½	4.15	3.50 - 3.55	3.60
26	4.40 - 4.60	4.65	3.72½- 3.80	3.90	4.10 - 4.15	4.17½	3.50 - 3.60	3.62½
27	4.42½- 4.65	4.70	3.70 - 3.80	3.87½	4.10 - 4.12½	4.15	3.45 - 3.55	3.60
28	4.45 - 4.65	4.70	3.60 - 3.70	3.82½	4.12½- 4.15	4.17½	3.45 - 3.57½	3.60
29	4.42½- 4.62½	4.67½	3.60 - 3.70	3.75	(*)	(*)	3.50 - 3.55	3.62½
30	4.42½- 4.60	4.62½	3.60 - 3.70	3.80	4.12½- 4.17½	4.17½	(*)	(*)
31	....	....	....	....	4.07½- 4.10	4.12½	3.55 - 3.60	3.65

Day.	November.				December.			
	1899.		1898.		1899.		1898.	
	Bulk.	Tops.	Bulk.	Tops.	Bulk.	Tops.	Bulk.	Tops.
1	$4.02½-$4.07½	$4.10	$3.45 -$3.57½	$3.65	$3.75 -$3.77½	$3.80	$3.20 -$3.35	$3.42½
2	4.00 - 4.05	4.07½	3.40 - 3.50	3.55	3.77½- 3.80	3.85	3.30 - 3.37½	3.42½
3	4.02½- 4.05	4.10	3.45 - 3.55	3.60	(*)	(*)	3.25 - 3.37½	3.45
4	4.02½- 4.05	4.07½	3.47½- 3.60	3.70	3.80 - 3.82½	3.87½	(*)	(*)
5	(*)	(*)	3.50 - 3.62½	3.67½	3.80 - 3.85	3.87½	3.35 - 3.45	3.50
6	4.00 - 4.05	4.05	(*)	(*)	3.85 - 3.92½	3.95	3.25 - 3.40	3.45
7	4.02½- 4.05	4.10	3.50 - 3.65	3.70	3.82½- 3.87½	3.90	3.20 - 3.35	3.45
8	4.00 - 4.05	4.07½	3.47½- 3.60	3.67½	3.87½- 3.95	3.97½	3.25 - 3.35	3.45
9	4.02½- 4.10	4.12½	3.35 - 3.50	3.60	3.92½- 3.97½	3.97½	3.25 - 3.35	3.40
10	4.00 - 4.05	4.07½	3.40 - 3.55	3.60	(*)	(*)	3.25 - 3.35	3.45
11	4.00 - 4.02½	4.05	3.35 - 3.47½	3.60	3.92 - 3.97½	4.00	(*)	(*)
12	(*)	(*)	3.40 - 3.50	3.52½	3.95 - 3.97½	4.05	3.30 - 3.40	3.42½
13	3.95 - 3.97½	4.02½	(*)	(*)	4.00 - 4.05	4.07½	3.30 - 3.42½	3.50
14	3.90 - 3.95	4.00	3.35 - 3.45	3.52½	3.97½- 4.02½	4.07½	3.25 - 3.37½	3.45
15	3.90 - 3.97½	4.00	3.25 - 3.35	3.45	4.00 - 4.05	4.10	3.25 - 3.35	3.42½
16	3.90 - 3.95	3.97½	3.25 - 3.37½	3.42½	4.07½- 4.12½	4.20	3.20 - 3.30	3.37½
17	3.87½- 3.92½	3.95	3.30 - 3.40	3.15	(*)	(*)	3.25 - 3.32½	3.40
18	3.87½- 3.92½	4.00	3.30 - 3.40	3.45	4.00 - 4.05	4.07½	(*)	(*)
19	(*)	(*)	3.30 - 3.40	3.42½	3.92½- 4.00	4.02½	3.25 - 3.32½	3.40
20	3.90 - 3.95	4.00	(*)	(*)	3.97½- 4.02½	4.07½	3.25 - 3.35	3.37½
21	3.90 - 3.95	3.97½	3.35 - 3.42½	3.45	4.05 - 4.10	4.12½	3.25 - 3.35	3.45
22	3.90 - 3.95	3.97½	3.32½- 3.45	3.50	4.05 - 4.10	4.12½	3.25 - 3.40	3.50
23	3.90 - 3.92½	3.95	3.40 - 3.50	3.60	4.05 - 4.10	4.12½	3.35 - 3.45	3.52½
24	3.80 - 3.85	3.90	3.40 - 3.50	3.57½	(*)	(*)	3.40 - 3.55	3.60
25	3.80 - 3.82½	3.85	3.32½- 3.45	3.50	Holiday.	h'day.	(*)	(*)
26	(*)	(*)	3.25 - 3.32½	3.40	4.12½- 4.20	4.22½	3.45 - 3.55	3.60
27	3.80 - 3.82½	3.87½	(*)	(*)	4.12½- 4.17½	4.25	3.35 - 3.52½	3.60
28	3.75 - 3.80	3.82½	3.20 - 3.30	3.37½	4.15 - 4.22½	4.30	3.40 - 3.60	3.70
29	3.70 - 3.72½	3.75	3.15 - 3.30	3.35	4.22½- 4.30	4.35	3.35 - 3.55	3.65
30	3.72½- 3.75	3.77½	3.17½- 3.30	3.40	4.20 - 4.30	4.30	3.35 - 3.60	3.70
31	....	....	....	....	(*)	(*)	3.45 - 3.65	3.75

32. OMAHA PRICES FOR LIVE STOCK, 1899.[1]

Range of prices for horses at Omaha, monthly, for year 1899.

Months.	Drafts.	Chunks.	General purpose.	Southern.	Western.	Drivers.	Carriage teams.
January	$75-$115	$50-$75	$35-$60	$20-$45	$10 -$20	$95-$225	$200-$300
February	80- 120	60- 80	35- 65	20- 50	10 - 20	95- 225	200- 300
March	90- 125	60- 85	40- 65	20- 50	10 - 20	95- 225	200- 300
April	90- 140	65-100	40- 70	20- 50	10 - 20	95- 225	200- 300
May	100- 150	65-100	40- 70	20- 45	12½- 22½	90- 325	300- 450
June	90- 140	65-100	40- 65	15- 45	12½- 25	90- 325	300- 450
July	90- 140	60-100	40- 60	15- 45	15 - 27½	75- 200	200- 325
August	90- 140	60-100	40- 60	15- 45	17½- 30	75- 220	210- 420
September	90- 140	60- 100	40- 60	15- 45	20 - 40	85- 175	215- 360
October	100- 160	65-110	40- 65	20- 45	30 - 77½	90- 215	175- 435
November	90- 150	65-100	40- 60	20- 50	30 - 65	90- 325	230- 370
December	100- 160	60-100	35- 60	20- 55	29 - 45	90- 300	200- 375

Valuation of horses, $1,646,064.

Range of prices for sheep, monthly, for year 1899.

Months.	Native sheep.	Native lambs.	Western sheep.	Western lambs.
January	$3.25-$4.75	$4.25-$5.00	$3.00-$4.30	$4.25-$4.90
February	3.25- 4.50	4.25- 5.00	3.00- 4.15	4.00- 4.90
March	3.25- 5.00	4.25-[1]9.00	3.25- 5.10	4.25- 5.75
April	3.50- 5.00	4.50- 5.50	3.00- 5.35	4.25- 5.80
May	3.50- 5.50	4.50-[1]9.50	3.25- 5.65	4.25- 6.85
June	3.00- 5.25	4.50- 6.75	3.00- 5.50	4.25- 6.00
July	3.00- 4.75	4.25-[1]7.00	3.00- 4.45	4.00- 6.00
August	3.50- 4.50	4.25- 5.00	3.25- 4.35	4.25- 6.35
September	3.25- 4.10	4.50- 5.50	3.25- 4.25	4.25- 5.25
October	3.00- 4.40	4.25- 5.00	2.75- 4.20	4.00- 5.00
November	3.00- 4.60	4.25- 5.50	2.75- 4.50	4.00- 5.25
December	2.75- 4.60	4.25- 5.50	2.75- 4.50	4.00- 5.50

[1] Spring lambs.

Valuation of sheep, $4,360,000.

Range of prices for cattle at Omaha, monthly, for year 1899.

Months.	Native beeves.	Native cows.	Stockers and feeders.	Western steers.	Western cows.
January	$3.75-$5.50	$2.25-$4.75	$3.00-$4.90	$3.50-$4.75	$2.00-$3.75
February	3.75- 5.50	2.25- 5.00	3.00- 5.10	....	2.50- 3.10
March	3.85- 5.40	2.25- 4.50	3.25- 5.00	3.75- 4.65	2.25- 3.50
April	4.00- 5.50	2.25- 4.75	3.25- 5.25	....	....
May	4.25- 5.50	2.25- 4.90	3.25- 5.50	4.25- 4.90	2.50- 3.50
June	4.00- 5.50	2.00- 5.05	3.00- 5.25	3.75- 4.85	2.25- 3.50
July	4.00- 5.80	2.00- 5.20	3.00- 5.50	3.50- 5.00	2.50- 4.35
August	4.00- 6.25	2.25- 4.75	3.00- 4.90	3.25- 5.35	2.00- 4.45
September	4.00- 6.15	2.25- 5.00	3.00- 5.00	3.25- 5.25	2.00- 4.35
October	4.25- 6.30	2.00- 4.95	3.00- 5.35	3.25- 4.90	2.00- 4.35
November	4.50- 6.05	2.25- 4.75	3.00- 5.25	3.50- 4.90	2.25- 4.35
December	4.00- 7.25	2.00- 5.00	3.00- 5.00	3.50- 4.65	2.00- 4.25

Valuation of cattle, $35,149,800.

Range of prices for hogs at Omaha, monthly, for year 1899.

Months.	Heavy packing, 275-500 pounds.	Mixed, 230-270 pounds.	Light, 150-225 pounds.
January	$3.40 -$3.75	$3.40 -$3.72½	$3.30 -$3.70
February	3.47½- 3.77½	3.40 - 3.77½	3.30 - 3.72½
March	3.50 - 3.75	3.50 - 3.75	3.40 - 3.67½
April	3.57½- 3.85	3.57½- 3.80	3.50 - 3.75
May	3.55 - 3.80	3.50 - 3.75	3.45 - 3.67½
June	3.37½- 3.75	3.25 - 3.75	3.47½- 3.75
July	3.67½- 4.42½	3.70 - 4.40	3.70 - 4.35
August	4.10 - 4.50	4.15 - 4.62½	4.17½- 4.70
September	4.10 - 4.45	4.10 - 4.50	4.15½- 4.52½
October	4.00 - 4.45	4.00 - 4.50	3.95 - 4.57½
November	3.60 - 4.12½	3.65 - 4.12½	3.65 - 4.10
December	3.70 - 4.20	3.70 - 4.20	3.70 - 4.20

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[1] From report of Union Stock Yards Company, 1899.

Valuation of hogs, $21,042,500.

33. PRICES OF LIVE HOGS IN THREE MARKETS COMPARED.

[Per 100 pounds.]

	Omaha (mixed).[1]	Kansas City (top).[2]	Chicago.[3]
1889.			
January	$3.72½	$3.90	$4.05
February	3.77½	3.87½	4.05
March	3.75	3.85	4.00
April	3.80	3.92½	4.15
May	3.80	3.85	4.05
June	3.75	3.90	4.00
July	4.42½	4.45	4.70
August	4.62½	4.80	5.00
September	4.50	4.70	4.90
October	4.50	4.65	4.90
November	4.12½	4.12½	4.35
December	4.20	4.35	4.45

[1] From Report of Union Stock Yards Company, Omaha, Nebr,, 1899.
[2] From Stock Raisers and Shippers' Handbook, Kansas City, 1900.
[3] From Crop Reporter, May, 1900.

34. TENDENCIES AFFECTING THE PRODUCER'S MARKET.

The most noteworthy tendency involving the position of the grower of live stock has been that of the primary or terminal markets keeping close to the sources of supply. The cattle markets have moved westward with the expansion of the pastoral area, and pork-packing centers have moved with the development of cereal production suited for fattening hogs. The pork-packing industry has had to follow in order to get a cheap supply of hogs and the beef-producing industry to command its supply of cattle. The result of this tendency of consumers to keep close upon the heels of producers has been to reduce the expense of distribution and to give the producer the benefit of a first-hand market.

Another influence favoring the producer in the live-stock market is the practice of continuing packing, particularly pork packing, throughout the entire year. Prior to the eighties the packing season was confined to the winter months alone, and the farmer's market was practically confined to the months of November, December, and January, or only one-fourth of the year. The introduction of refrigerating processes in cooling the carcasses has revolutionized the industry and given the producer of hogs an all-year-round market. There were nearly 14,000,000 hogs packed in the West in 1898 during the 8 summer months, or over half of the entire pack, while in 1873 but 8 per cent of the year's pack was slaughtered in the summer season.[1]

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[1] United States Treasury's "Summary:" The Provision Trade, p. 2289, February, 1900.

PART SIXTH.

THE DISTRIBUTION OF DAIRY PRODUCTS.

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1. DEVELOPMENT OF DAIRYING EAST AND WEST.

Within the past 20 or 30 years dairying has done more than any other form of farm industry toward the reconstruction of rural enterprise. Dairying, as now followed in New England, the North Atlantic States, and the Central States of the West, is the product of rural adversity. In New England dairying arose out of the necessity of finding a market for the products near home. It was a remedy for the abandoned farm. In the Middle States the same necessity was felt when competition of Western cereals and live stock took away much of the local market for these supplies in Pennsylvania, New York, and New Jersey. In the West dairying arose out of the ruinously low price of these very cereals and cattle, which had ruined the farmer of the East.

These conditions of farming made it necessary to change the farm policy entirely over more than half of the United States. For both surplus cereals and live stock a new and more profitable use had to be found. In the development of dairying we have the solution of the critical problem that faced the farmer generally, except in the South, during the fall in the price of staple farm products, in the past 30 years. In other words, dairying has revolutionized American farm economy, and has thereby radically changed the relation of the producer to the consumer of farm products.

The dairy interests of New York State are possibly the most extensively developed in the country. In the year 1894 there were 1,658 factories making butter and cheese in this State. Besides this consumption of milk supply, New York City at the southeast takes annually about 400,000,000 gallons, mainly from New York State farms. At the other end of the State the city of Buffalo takes annually a milk supply of about 7,000,000 gallons. These figures suggest the scale on which dairying has developed a market for the milk products of the farm. The daily supply of milk is transported in some cases not far from 500 miles.

Butter and cheese production in New York.[1]

Year.	Total factories.	Butter factories.	Cheese factories.	Butter and cheese factories.	Total butter product.	Total cheese product.
					Pounds.	*Pounds.*
1899	1,611	381	1,023	207	30,586,088	105,405,266
1894	1,658	311	1,032	311	32,218,626	115,760,825
1892	1,624	255	1,156	213	19,497,857	131,148,411

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[1] Reports New York Department of Agriculture, 1895 1899

Dairying districts may be divided into two main classes: (1) Those which lie near enough to large cities to supply them with their daily requirement of milk and cream and can utilize the surplus milk in the manufacture of butter and cheese; (2) those districts which are so far removed from large milk-consuming centers that they are obliged to convert their milk into butter and cheese in order to reach distant markets for these products. In general the eastern dairying States fall under the first of these classes and the western dairying States under the second of these classes.

The census of 1890 reports that one-half of the butter and one-third of the cheese made in the United States is made in the 12 north central States of Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, North Dakota, South Dakota, Iowa, Missouri, Nebraska, and Kansas.

The figures below are for butter, cheese, and condensed milk factories in 1880 and 1890 in 10 States:

States.	1880.	1890.	States.	1880.	1890.
Illinois	285	262	New York	1,652	1,308
Iowa	244	497	Ohio	452	330
Kansas	48	101	Pennsylvania	146	300
Michigan	74	100	Vermont	85	123
Minnesota	27	106	Wisconsin	414	996

According to Commissioner G. M. Whitaker, of Massachusetts, "the annual value of the dairy products of the nation is in round figures $500,000,000. In the 40 years previous to the census of 1890 the population had increased 174 per cent, but the number of milch cows had increased but 166 per cent. In the East, the old dairy center, the increase in milch cows was but 50 per cent, while in the north central division the increase was 700 per cent. In the Dakotas the increase in 30 years was 1,050 per cent.

"The production of butter has increased more rapidly than the increase in population. The census of 1850 reported 13.51 pounds per capita, and the census of 1890 19.24 pounds. One-half of the butter production is in 7 States. The largest butter State is Iowa, making 10.4 per cent of the country's production; next comes New York, with 9 3 per cent, and Pennsylvania third, with 8 per cent. This large increase of production shows the importance of a foreign outlet to prevent the surplus from unduly depressing the home market. Exports during the last 10 years have fluctuated between 6,000,000 pounds and 31,000,000 pounds. For the year ending June 30, 1899, the amount was 20,000,000 pounds.

"The production of milk for consumption is the second largest branch of the industry, using the product of 5,500,000 cows. The production of sale milk has received less attention than its magnitude warrants. Being a perishable product and often marketed in small quantities, statistics have been hard to gather. In Boston, with a population of 750,000 people, the large wholesalers brought into the city, in the year 1899, 95,000,000 quarts. Estimating the amount from other sources at 25,000,000, we have 120,000,000 quarts. The farmers netted on an average at least 2½ cents per quart, which makes the business to them worth $3,000,000. In New York, with twice the population of Boston, figures based upon the amount required to furnish the sale of milk, cream, and condensed milk used in the city are placed at 584,000,000 quarts per year. At 2½ cents per quart this amounts to $14,600,000."

In the East, Massachusetts and New York are representative dairying States. One only realizes how completely dairying has developed and transformed the farming system of Massachusetts by comparing the values of its 5 leading classes of farm products:

In the agricultural census of Massachusests (1895) the 5 leading products in order of importance were classified as follows:[1]

Products.	Value.	Percentage.
Dairy products	$16,234,049	30.70
Hay, straw, and fodder	12,491,090	23.62
Vegetables	6,389,533	12.08
Poultry products	3,871,318	7.32
Fruits, berries, and nuts	2,850,585	5.39
Five leading products	41,836,575	79.11
Total farm products	52,880,431	100

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[1] Census of Massachusetts, Pt. II., Vol. VI., pp. 353–354, 364.

Farming in Massachusetts is the outcome of two conditions—competition with the Western grain growers and the nearness of municipal markets. These two conditions have not only changed the character of farming from the extensive to the intensive system, but have likewise forced the farmer to select those lines of rural enterprise in which proximity to market gave him the advantage over remoter competitors. This advantage consists quite as much in a readier adaptation to local needs and tastes as in producing those things which depreciate most by long hauls between producer and consumer.

2. THE FARM DAIRY AS A DISTRIBUTIVE FACTOR.

The methods of producing butter in the United States have developed from the domestic or household system of production, through the factory system into the creamery system. In the quotations of the market the product of the last-named method stands highest on the list. The factory butter ranks lowest; intermediate between the other two stands the product of the domestic dairy.

In the butter market these 3 principal classes of products, in the order of their value, are designated as "creamery," "dairy," and "factory" butter. Each of these has from 2 to 4 different grades. The creamery class, taken as a whole, represents the highest achievement in American butter making, and is the product of the best methods known to the art of dairying. Its chief characteristic is superior and uniform quality. "Extra" creamery is the highest quality known to the market. Of the best class of product the New York and Elgin makes are representative; but practically all the States in which creamery methods have become established contribute to some extent to this variety of product. The productive areas in which the creamery system has made most progress are those of New England, New York, Pennsylvania, and the central West.

The kind known as dairy butter is the product of the majority of the 5,000,000 farms. It is consequently characterized by great variety in quality, both on account of the great variety in the methods of household production and because of the diverse conditions under which the milk supply is obtained. Nevertheless, the farm has always been able to compete with the factory and the creamery, as the standing of dairy butter in the market indicates. Moreover, the commercial position of the farm dairy is being greatly improved by the rapid adaptation of machinery to the dairying work of the individual farm.

In the year 1880 the quantity of farm-made and of factory-made butter reached 806,000,000 pounds. Seven hundred and seventy-seven million pounds of this was farm-made or dairy butter, and only about 30,000,000 pounds came from the factory. In 1890 the farm-made butter alone amounted to over 1,000,000,000 pounds (1,024,222,463).[1]

Cheese production, however, shows the opposite tendency; farm-made cheese is decreasing year by year and the great bulk of the country's output is a factory product.

The introduction of cream-separating machinery has put the farm, in the butter-making industry, upon a new competitive basis. The creamery and butter factory are actively in competition for the milk supply. By this improvement in method of separation, the farm household has in its power the means of utilizing on the premises its supply of milk for butter making. The machinery is especially devised for the purpose of production on a small scale, and can be resorted to as a remedy for low prices whenever the market prices for milk at the local creamery or factory are not satisfactory. On this account no piece of dairying machinery has done so much to enable the farmer to command the highest market price for his dairy products as has the farm separator. Its influence upon the commercial independence of the milk producer is described in the following article from the New York Produce Review:

"There has been a wonderful change of sentiment during the past 2 years regarding the practicability of the farm separator and its great value in developing the dairy industry of the country. Only a few people are now condemning its use, and part of this opposition comes from creamery sections where the well-equipped plants are provided with power machines and the necessary appliances for handling large quantities of milk speedily and well.

"But farmers have taken hold of the question and very many of them have already asserted that unless the separation of the milk can be done on the farm, so that they can have the warm, sweet skimmed milk to feed to the calves, they will make no effort to increase the milk production. They have listened to the arguments for and against the use of farm separators, and the opinion in favor of doing this work at home, with all the advantages that seem to accrue to the dairyman, has changed so rapidly that we are quite confident that more than 2,000 of the hand machines have been placed in use during the last year.

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[1] Census of 1890, Agriculture, p. 275.

"A visitor to any of the dairy conventions that have been held this fall and winter could not help contrasting the exhibits of cream separators with those of 3 years ago. Then the small hand machine was a curiosity, little known in most sections; to-day three-fourths of the exhibits are of these separators for use on the farm, and they are manufactured and sold by nearly every concern that makes a centrifugal machine.

"At Nashua, Iowa, where the bitterest separator fight in the annals of the trade took place something over 2 years ago, is a successful creamery plant run entirely under the farm separator system. Hundred of the machines have this year gone into other parts of the State also, while the sales in Kansas have run away up into the hundreds. There are to-day 8 farm separator creameries in the State of Kansas, 4 of which are well established and the others rapidly passing beyond the experimental stage. This betokens an interest not born of a day nor a season, but the outcome of thoughtful and careful consideration ot the whole question in the light of existing conditions.

"This country has reached a point as regards the dairy industry where changes are necessary if we are to develop and expand the business. Successive years of good crops and good prices for them, and large demand and high prices for young stock, as well as beef cattle, have tended to lessen interest in the dairy stock so far as milk production is concerned, and from almost every village and cross-road where there is a creamery plant comes the cry for more milk. To increase the supply is the problem of the hour. With the farm separator in the hands of our farmers, giving them the fresh, sweet skim milk for calves and hogs, and the cost of hauling the milk materially reduced, the dairy industry will receive an impetus which it can get from nothing else at present."

This solution of the problem puts the producer in possession of the by-product of dairying in the form of the skim milk, and the economical method which this involves of deriving this by-product on the farm makes the difference between a profitable and an unprofitable market for the farmer. Hence, it changes the entire relation of the farmer to the dairy market.

The farm dairy in many localities disposes of its butter product at the same price which the best creamery makes command. Though dairy butter is not largely made in distinctly creamery districts, in the Elgin district it finds a market locally at prices corresponding to the prices made on the Elgin Board of Trade.[1] The explanation of this is that while the market price of dairy butter often rules 22 per cent lower than best creamery, farmers in the Elgin district have brought their standard of home manufacture up to that of the local creamery standard. In reality the two grew up together from the time the late Gail Borden first established a condensing factory in the midst of that community, then already familiar with dairying. His rules and regulations for the production of milk required cleanliness as the fundamental article of the dairyman's creed. The instructions and rules which he laid down were closely followed by the farmers who supplied the milk to the condensing factory; and when the factory system of butter making was introduced into that district the farmers who were too far away to deliver milk to condensers adopted the same methods. The creamery, the condensary, and the dairy all maintain the high standard of cleanliness in milk which lies at the basis of the superior rank that this district's butter holds in the market.[2]

The economic position of the dairy farmer is not, however, solely of his own making. While it is true that his product may be equally good, his relation to the butter market is improved not a little by the presence of a central board of trade on which the state of the country's market receives thorough consideration daily, and by which the price is fixed with special regard to the interests of the producer. Practically all of the butter made in the Elgin district is sold upon the basis of that board of trade's prices.

Farm dairying commends itself especially where dairying is undeveloped and where there is no other market for the milk supply except shipping the milk to the cities. There are fine pastoral districts in northeastern Pennsylvania whose milk supply the railroads have refused to handle at all. For farmers thus situated the only outlet seems to be in the use of machinery by which the milk product may be put in a form to command access to the market.

Farm dairying has possibly relied too much on the local market. Sooner or later that may be overdone. Hence larger markets must be sought. Such a market is found in supplying private customers, to which butter is expressed directly from the local railway station to consumers in the city. This affords the producer a regular market at a fixed price the year round. The surplus can be disposed of to commission men. With private customers individual tastes can be studied more advantageously. His preferences as to size and make-up of package can easily be obtained. There is little trouble in holding such customers against competitors if the quality of the product is kept up. It is indeed surprising to learn how generally this relation between producers and consumers exists.

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[1] Correspondence, D. W. Willson, editor Elgin Dairy Reporter.

[2] Weekly prices of butter on Elgin Board of Trade.

Undoubtedly the future of dairying with a small herd lies in this direction. The capital outlay is small. The cost of the apparatus required to manufacture farm butter does not exceed $25 with the gravity system.[1] The expenses of marketing are low. Compared with the cost of exporting the milk, the butter is carried at a much lower rate, including delivery at consumer's door. So low is the rate that farm-made butter in Vermont is advantageously shipped to customers in southeastern Pennsylvania, in the vicinity of Philadelphia, by express the year round.

3. A REPRESENTATIVE NEBRASKA CREAMERY.

The development of dairying in the Western States has passed through several stages, the latest and most significant of which is that in which the creamery is the central feature of a system of widely distributed skimming stations. It remains to give an account of some such representative creamery enterprise, in Nebraska, in order to show what radical changes have been forced upon the productive system by the demands of the market and the depression in cereal prices.[2]

The creamery business began to attract attention in Nebraska about 20 years ago, when large and small creameries were established in almost every county in the eastern half of the State. These concerns were managed as joint stock and cooperative companies, the farmers furnishing perhaps a majority of the capital required to put them into operation. During the last 20 years more than three-fourths of these creameries have been closed on account of poor management, insufficient supplies of milk and cream, or the impossibility of making them pay expenses. The place of those going out of business has been taken by large concerns that collect cream from skimming stations in widely separated districts and manufacture it into butter in central churning establishments. To illustrate the revolution that has taken place in the creamery business in the last 5 or 10 years it may be well to describe the development and the plan of operation of a creamery company, located at Lincoln, a pioneer in the work of shipping cream long distances, and now perhaps the largest creamery in the world.

Ten years ago this creamery company began business in the old-fashioned way, sending wagons out into the country districts to gather the cream at the dairies and churning this cream into butter at the creamery. The proportion of expense to the volume of business was too great to make the business successful, and the company devised the plan of establishing feeders in thickly settled districts a few miles away, where the cream could be collected and brought in bulk to the creamery. This plan was given a thorough trial for several years. The company prospered and made a reasonable amount of money, but the managers saw that at every central creamery the fixed charges were out of all reasonable proportion to the amount of the product. The management then set about solving the problem by doing away with the 7 butter factories that the company operated in 1897 and bringing the cream to one great central factory for churning.

In March of that year the central butter factory, equipped with the best machinery to be procured and manned by expert butter makers, was ready for business, with a capacity for turning out 20,000 pounds of butter daily. At the beginning this factory was fed by 20 skimming stations, where the farmers brought their milk, taking away the skim milk after it had been through the separator or centrifugal skimming apparatus. The cream from these separators was put into cans holding 10 gallons each and shipped on express trains to the central plant at Lincoln for manufacture into butter.

Experience demonstrated that the cream could be sent long distances without deterioration, and the company organized new skimming stations in every community that promised to furnish enough milk to make it profitable. At the present time the company's central plant is supplied with cream coming from 97 different skimming stations located all over southern Nebraska, with a few in northwest Nebraska, a few in Colorado, and more than a dozen in Kansas. The

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[1] M. T. Allen, in The American Agriculturist, March 17, 1900.
[2] Report of Mr. Will Owen Jones, special agent, Lincoln, Nebr.

longest distance over which the cream is carried is 418 miles—from Crawford, Nebr.: the shortest is 6 miles—from Havelock. The stations, with distances from Lincoln, are as follows:

Stations.	Distance from Lincoln.[1]	Stations.	Distance from Lincoln.
	Miles.		*Miles.*
Ansley	155	Holyoke, Colo	332
Adams	29	Holdrege	151
Arago	100	Herndon, Kans.	297
Atwood, Kans.	312	Haigler	301
Alliance	361	Hildreth	148
Arapahoe	189	Imperial	288
Axtal	138	Indianola	216
Ashton	138	Juanita	103
Bertrand	167	Kearney	136
Beatrice	40	McCook	228
Benkleman	280	Morrill, Kans.	....
Broken Bow	172	Merna	181
Bern, Kans.	94	Marsland	396
Bremen, Kans	......	Lanham	78
Blue Rapids, Kans	88	Long Island, Kans.	228
Brush, Colo	395	Oxford	174
Burwell	178	Orleans	190
Beaver City	241	Princeton	18
Bayard	407	Palisade	257
Culbertson	239	Republican City	210
Crawford	418	Success	26
Campbell	131	Spalding	140
Cambridge	203	Sterling	36
Curtis	221	Syracuse	36
Cuba, Kans	122	Stratton	261
Danbury	271	St. Francis, Kans	355
Cortland	22	Sargent	183
Denton	9	Trenton	250
Eagle	16	Upland	140
Elwood	180	Verdon	91
Elsie	278	Venango	313
Eustis	190	Washington, Kans.	98
Elmwood	23	Wellfleet	240
Franklin	162	Wolbach	121
Falls City	92	Wilsonville	257
Farnam	201	Wallace	266
Fort Morgan, Colo	405	Wauneta	271
Guide Rock	148	Bartlett	176
Greeley	139	Baker, Kans	115
Grant	296	Barnes, Kans	111
Frankfort, Kans	140	Boxbutte	392
Hanover, Kans.	86	Bryan	180
Huntley	160	Lnetor	238
Humbolt	72	Lamar	301
Hemingford	380	Hayes Center	273
Havelock	6	Germantown	19
Haxtun, Colo	349	Taylor	190
Harvard	81	Lawn	400

[1] In the main these instances are figured from the railroad maps, using the shortest lines. In some cases, however, the distances represent the number of miles traveled by the cream in going from the skimming station to Lincoln.

The cream is carried on passenger trains, requiring not more than 14 hours to bring it from the most distant station. It is taken immediately to the factory, where it is handled in the most scientific manner possible. All the cream from widely separated localities is thrown together and given uniform treatment under the most perfect conditions. When the company maintained seven different factories it was difficult to keep the product up to a high and uniform grade. On the authority of the company's president it can now be said that since the central plant was established the company has not sent to market an ounce of product that did not sell at the highest price quoted for creamery butter.

The central plant has now been in operation for three years, and it is possible to give some figures on the financial side that may be considered conclusive. In all of the territory reached by this company, practically all of the old-fashioned cooperative creameries have gone out of business because they can not pay as much for cream or milk as this concern. The price paid by the Beatrice Company is based upon the selling price of butter on the Elgin and New York markets. On June 11, 1900, for example, butter was quoted at 18 cents per pound. On that day the farmers received 14 cents per pound for their cream, or "butter fat." One pound of butter fat will make 1.1 pounds of butter. That proportion is usually maintained, but no contract exists for paying any definite amount for the butter fat. When the product of the skimming stations is large the company can and does pay a larger percentage of the price of butter than when the product is small. It is the aim of the management to make 1 cent a pound gross on all the butter. The company, even with its 97 skimming stations, covering a vast area of territory, finds it difficult to secure cream enough to keep its large plant in operation, and endeavors to stimulate the farmers to bring in the milk by offering as high a price as possible. The highest price paid for butter fat during the last 3 years was 19 cents; the lowest was 13 cents. It is a matter of record that a farmer with 10 cows can pay all of his farm and household expenses with the proceeds of the sale of cream to one of these skimming stations, leaving the crop raised on his farm clear profit. The effect of the establishment of this great company upon the farmer has been to give him a steady and certain market for his cream, with a check in payment therefor every month, whereas before its advent he had no market at all, or was obliged to sell his product to a small, indifferently managed creamery that could not do business enough, on account of a lack of sufficient cream, to make a profit after paying a low price for cream.

The development of the creamery in question has been made possible by the granting of special rates for transporting the cream by the railroads. A special commodity freight rate has been made, and the product is carried on express trains without extra charge. The cost of the transportation of the cream is three-fourths of a cent, on an average, on each pound of butter turned out.

It is possible under these rates to bring the cream to the central factory and send the butter from the factory to market as cheaply as butter could be sent in smaller amounts from small creameries located in different parts of the States in the territory supplied by skimming stations. Butter is sent from Lincoln to the Atlantic seaboard for 1 cent a pound and to Chicago for one-half a cent a pound.

The output of the central factory for May, 1900, was 300,000 pounds of butter. For June it will be 400,000 pounds. The company did business to the amount of just about $1,000,000 in 1899.

Since the establishment of the present system of doing business by this creamery company similar concerns have been founded at Omaha, Nebr., at Sioux City, Iowa, and at Fremont, Nebr. A similar method of collecting cream in central stations has been in operation for some time in Kansas, not, however, with the concentration of butter making that is seen at Lincoln.

The large companies doing business under this system are not competitors, for the reason that they do not cover the same territory. In a very few cases farmers living between stations of different companies or near to local creameries, or not far from cities and towns, have a choice of markets for their milk. In the main, however, the skimming-milk stations of this creamery company have brought to farmers an entirely new market, and they would have none at all if these stations were removed. They have no guaranty that the company will pay a fair price for the milk except the indefinite guaranty caused by the conditions under which the business is conducted. The company is unable to secure enough cream to keep its plant in operation fully and to supply the demand for its butter. While this condition lasts self-interest demands the payment of the highest price that can be paid for the milk in order to stimulate the production. The farmers of this region, as a rule, are accustomed to reap generous crops without much labor when the seasons are favorable, and they do not like to give the energy and close attention that are required to run a dairy farm, except in seasons when the crops fail and the cow becomes the main support of the family. It is the wish of the company to make dairying so profitable that the farmers will be willing to give attention to their cows as a regular part of their farming operations. So long as this situation lasts it may be assumed that the company will make the price of the milk as high as the butter market will justify.

4. TYPICAL WESTERN CREAMERY STATES.

Iowa, Kansas, and Nebraska, as dairying States, are typical of the Western group. The aggregate value of the products of the soil in Iowa in 1898 was officially given at $225,000,000. The butter sold outside the State alone, for the three years 1896-1898, averaged 80,000,000 pounds. The creamery industry has reached proportions of the first rank here. A few figures will indicate the real strength of this industry.

Creameries and skimmed-milk stations in Iowa.[1]

	1898.	1897.
Total creameries and skimmed-milk stations	954	891
Owned and operated by individuals	510	504
Owned and operated on cooperative plan	342	349
Owned and operated by stock companies	88	37
Patrons, 91,998.		

[1] Iowa State Agricultural Report, 1898, p. 166.

The dairying map of Iowa gives an idea of the diffusion of this industry throughout that State.

Shipments for a period of years are reported by the railroads in the following table:

Shipments of butter by rail from Iowa.[1]

Year ending October 1—	Net pounds shipped.	Increase (+), decrease (—).	Year ending October 1—	Net pounds shipped.	Increase (+), decrease (—).
1890	71,225,793		1895	66,497,108	+11,987,691
1891	68,690,716	—2,565,080	1896	80,032,916	+13,535,808
1892	60,112,931	—8,577,785	1897	83,620,081	+ 8,587,165
1893	54,572,902	—5,540,029	1898	77,531,337	— 6,088,744
1894	54,509,417	— 63,485	1899[2]	91,683,184	+14,151,847

[1] Iowa Agricultural Report, 1898, p. 169.

[2] The Milk Reporter, February, 1900.

The distribution of Iowa butter shipped out of the State is given in pounds and percentages to the 9 important city markets, to 16 different States, and several foreign countries.

Destination of Iowa butter.[1]

Markets.	1898.	1898.	1897.
	Pounds.	*Per cent.*	*Per cent.*
New York City	30,903,920	64.53	71.0
Chicago	6,510,901	13.59	9.5
Boston	3,634,913	7.59	8.1
Philadelphia	1,351,304	2.82	3.4
New Orleans	1,192,304	2.49	1.6
Elgin	1,023,256	2.14	.8
Pacific coast	562,072	1.17	.5
Cleveland	484,291	1.01	.9
Brooklyn	334,517	70	.0

[1] Iowa Agricultural Report, 1898, p. 171.

Shipments were also made to 16 States, to Washington, D. C., and to other cities, as follows: New Haven, 303,730; Washington, D. C., 172,227; Pennsylvania, 355,077; New York, 341,804; Illinois, 249,346; Rhode Island, 203,330; New Jersey, 154,816; Missouri, 67,152; Kentucky, 43,786; Montana, 38,616; Kansas, 16,862; Colorado, 14,774; Michigan, 13,407; Massachusetts, 8,067; Wyoming, 3,573; Arizona, 3,243; Alabama, 1,704.

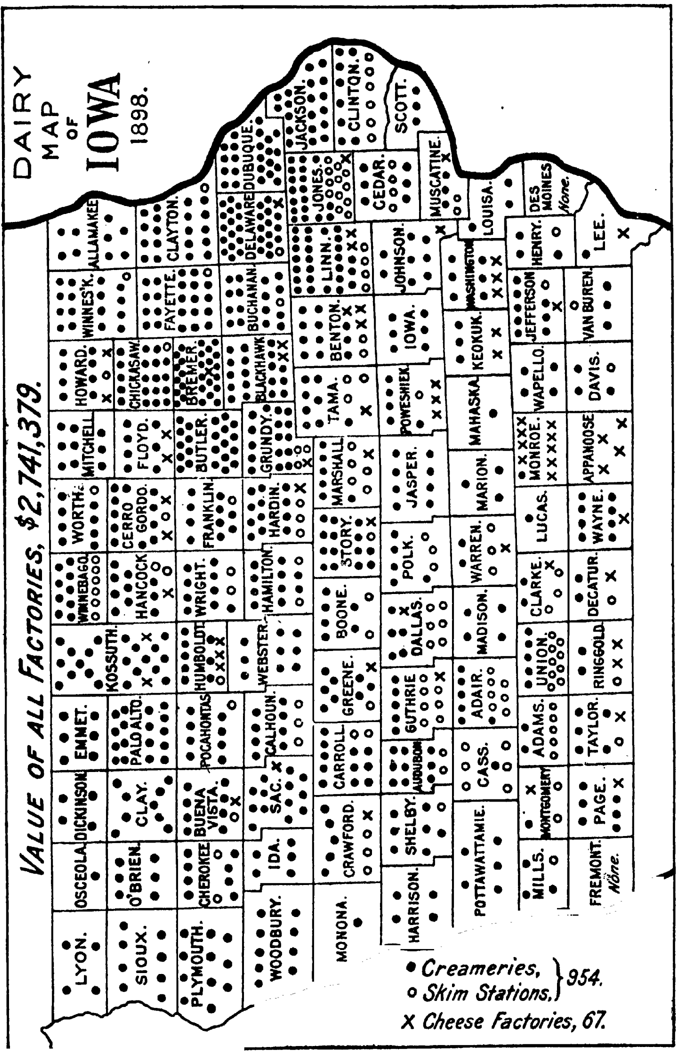
Foreign shipments, England, 66,162; Mauritius, 5,710; Burma, 1,080.

Total of all shipments of which the destination is reported is 47,890,131 pounds.

Kansas authorities estimate that the amount of butter and cheese made there approximates 30,000,000 pounds per annum. Of this amount 30 per cent is shipped to Eastern markets and the rest to the South and West. Butter is the principal dairying product. The milk supply for cities is local, and the cheese industry is a secondary feature.

The attention of Kansas agriculturists was not directed to the possibilities of the dairying interests in the State until about 10 years ago. The production and marketing of butter and cheese previous to that time were given only desultory attention, and in the estimation of the farmer the returns therefrom were not of sufficient volume to warrant the investment of any great sum in extending this [illegible] business. The institution of skimming stations, creameries, and cheese factories was gradual, but from the time of their first appearance the farmers found it paid to handle only the better grades of cattle.

To-day there are 25,000 persons engaged in supplying the market thus afforded and the product of 250,000 choice cows, valued at $8,000,000, is required to meet the demands of the 400 Kansas creameries, skimming stations, and cheese factories, which are valued at $600,000, and whose annual output is worth $8,000,000.[1]


DAIRY MAP OF IOWA 1898.
VALUE OF ALL FACTORIES, $2,741,379.
● Creameries, ○ Skim Stations, 954.
X Cheese Factories, 67.
ALLAMAKEE. CLAYTON. DUBUQUE. JACKSON. CLINTON. SCOTT.
WINNESH'K. FAYETTE. DELAWARE. JONES. CEDAR. MUSCATINE. LOUISA. DES MOINES None.
HOWARD. CHICKASAW. BREMER. BUCHANAN. LINN. JOHNSON. WASHINGTON. HENRY. LEE.
MITCHELL. FLOYD. BUTLER. BLACKHAWK. BENTON. IOWA. KEOKUK. JEFFERSON. VAN BUREN.
WORTH. CERRO GORDO. FRANKLIN. GRUNDY. TAMA. POWESHIEK. MAHASKA. WAPELLO. DAVIS.
WINNEBAGO. HANCOCK. WRIGHT. HARDIN. MARSHALL. JASPER. MARION. MONROE. APPANOOSE.
KOSSUTH. HUMBOLDT. HAMILTON. STORY. POLK. WARREN. LUCAS. WAYNE.
EMMET. PALO ALTO. POCAHONTAS. WEBSTER. BOONE. DALLAS. MADISON. CLARKE. DECATUR.
DICKINSON. CLAY. BUENA VISTA. CALHOUN. GREENE. GUTHRIE. ADAIR. UNION. RINGGOLD.
OSCEOLA. O'BRIEN. CHEROKEE. SAC. CARROLL. AUDUBON. CASS. ADAMS. TAYLOR.
LYON. SIOUX. PLYMOUTH. IDA. CRAWFORD. SHELBY. POTTAWATTAMIE. MONTGOMERY. PAGE.
WOODBURY. MONONA. HARRISON. MILLS. FREMONT. None.

Level roads, passable throughout the year, enable the producer to bring his supplies to the stations regularly. The use of new machinery and the presence of rival companies with large capital insure prompt acceptance of the milk and favorable remuneration to the farmer. The markets of the whole country are

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[1] Kansas, the Dairy's Utopia, p. 2.

available the year round, the refrigerator-car system insuring delivery of goods promptly and as fresh as though the article were for domestic consumption.

The product of the Kansas dairies is of such a high grade that other and older dairy States find in it a formidable competitor. Not only is it holding its own in the domestic markets, but it has made a bid for foreign recognition, and successfully, for 25 carloads of butter were exported in 1897.

The accompanying map of Kansas dairying industries gives the several kinds of establishments in 1898. The 400 establishments here located represent an annual output of $8,000,000,[1] or one-fourth of the value of the Kansas wheat crop of that year.

5. EASTWARD FREIGHTS AND ELGIN PRICES COMPARED.

Dating from a time previous to 1880—about 1874 to 1876—rates on butter from the Elgin market to New York have changed so little that it is hardly worth noting. Whatever changes have taken place have been the result of only temporary disturbances caused by the competition of the fast freight lines, lasting only a week or two, then returning to normal rates again. Other rates have fallen, many of them fully one-half, but butter rates have remained practically stationary for this period of 25 years, "and there does not seem to be any means at the present time to secure any change, either for or against the proposition." The rate from Elgin to New York stands now, as it has stood since 1880 and substantially since 1875, at 82.86 cents per 100 pounds. (See diagram opposite page 278.)

There remains, however, a consideration which is equivalent to a reduction in rates. Butter is now carried in a much improved kind of car and the speed in transit has been considerably increased. Butter carried in refrigerator cars it distributed under much better conditions and much better service now than as any previous time. This is true whether the shipment be a carload lot or a dozen tubs. In this respect the western producers have gotten the equivalent of a reduction in rates by an improvement in service. Possibly this accounts for the absence of any serious complaints on account of what is relatively a high freight charge. It must also be observed that commodities like this, with large value in little bulk can stand a high rate without prejudice, which grosser products of the farm could not easily endure without contracting their market.

The refrigeration service for transporting western dairy products was inaugurated from Chicago and throughout the western territory 25 years ago. At that time it was not of a very high grade, however. The great difficulty that shippers of butter had to contend with at that time was the scarcity of cars that were sent out into the surrounding country to collect the products of the creameries from local stations. The article had then to be concentrated to Chicago in ordinary cars especially fitted with refrigerating advantages for the larger portion of the trip to market.

Within the past 15 years the railway companies have, on account of the remarkable development of the dairying industry in territory west of Chicago, arranged to run cars over their various lines once or twice a week, and in many cases three times a week, to collect the creamery product for shipment. These cars are run as regular freight trains, they stop at every station, and are thoroughly iced, so that their contents are sure of being in the best state of preservation upon arrival at Chicago for transfer and diversion to destination. The expense of refrigerator service is borne by the railway companies.

Large creamery stations now ship by carload lots through to destination, without breaking bulk. The creamery districts of the West are thus admirably served with refrigerated transportation, not only in local but in through shipments. On this account the Western shipper to the Eastern seaboard markets and intermediate points has an advantage over the New England shipper of butter. In the experiment of the Department of Agriculture already referred to, refrigerator-car service from New Hampshire, Massachusetts, and Connecticut could not be obtained, and express had to be utilized for the 6 shipments made to New York in 1897. It cost more per pound to bring butter to the port of New York from creameries located 100 to 300 miles away than to bring it 10 times as far, and the butter came in better order from the more distant West.

Railway rates on butter compared.—Major Alvord, in the series of experimental exports, gives the rates in force at the time in actual shipments to New York or Philadelphia from different creamery sections of the country.

The transportation rate on butter, he says, by fast freight refrigerator lines, Chicago to New York and Philadelphia, ranged during the season from 60 to 70 cents per 100 pounds. From points West to Chicago the rates were much higher and the service less efficient. It costs from $1 to $1.20 to get 100 pounds of butter from Kansas or Nebraska to Chicago, and this without refrigerator service all the way. Even from some places in Iowa the rate to Chicago was higher than from that city to seaboard. From central New York expressage (without refrigeration) was also at a higher rate, and to move butter from Vermont to New York, also by express, without refrigeration, it cost 2 cents a pound, or more than the charge for better service from central Kansas. The prevailing rates from Wisconsin and Minnesota, with through refrigerator cars, were 1 cent and 1⅛ cents, respectively. All of these rates are computed upon net weight of butter shipped.

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[1] From Kansas, the Dairy's Utopia.

6. HOW ELGIN BOARD OF TRADE PRICES ARE MADE.

In the butter trade of the West, Elgin, Ill., occupies a conspicuous place, on account of the high grade of the local product and the organization of dairying interests centered there. The fancy Elgin creamery grade is the acknowledged standard for this class throughout the country. Elgin prices for this grade have a wide influence on prices for the fancy creamery in all markets.

The board of trade prices are established each Monday for practically all the butter made by the factories in that district. The board membership consists of the manufacturers and dealers in dairy products in this territory, who are organized for the purpose of finding customers for the product of the factories of both cheese and butter, directly to large distributers, leaving out largely what is known as the dealing between the manufacturers and the retail trade. The prices made each week vary, as the supply and demand.

The extent of the business done by this board of trade is perhaps best indicated by giving the figures of its butter and cheese sales for a series of years. These sales in 1899 reached a total of almost $10,000,000. They represent the transactions of the dairying interests centered in this official body whose quotations are taken as standard quotations by producers and dealers in general.

Volume of butter and cheese transactions on the Elgin Board of Trade.

	Pounds.	Value.
1894.		
Butter	32,550,290	$7,128,513.00
Cheese	5,735,029	451,633.00
Total		7,580,146.00
1895.		
Butter	39,028,543	8,078,908.00
Cheese	10,696,010	641,760.00
Total		8,720,668.00
1896.		
Butter	38,655,249	6,919,289.00
Cheese	7,279,977	436,798.00
Total		7,356,087.00
1897.		
Butter	44,224,020	9,137,219.00
Cheese	9,520,668	618,843.00
Total		9,756,062.00
1898.		
Butter	42,579,139	8,004,878.00
Cheese	6,841,715	496,024.00
Total		8,500,902 00
1899.		
Butter	43,610,507	9,027,374.00
Cheese	6,104,725	518,901.00
Total		9,546,275.00

The advantage of such a body of organized producing interests as the Elgin Board of Trade to the producers in general is self-evident. First of all, its weekly quotations of the board prices is a standard for producers of that grade of product everywhere. No commercial agency renders a more valuable service than that one which enables the individual producer to know whether or not he is getting

the market value for his products, and that is just what this board does for each individual farmer.

Furthermore, the existence of such a body, whose weekly price is accepted by producer and dealer as standard, provides a basis for contract relations extending far into the future. Practically all of the milk sold to creameries in that locality is sold on the basis of the price of butter on the Elgin board. In the Chicago market all dairy products have the advantage of this basis of current valuation. New York, on the other hand, lacks anything of the kind. The New York Milk Exchange price, while serving as a basis, is too exclusively a quotation made in the interest of city dealers. Hence the relations between producers and dealers has been unstable and especially unsatisfactory to the producer.

The method by which the Elgin Board of Trade determines upon butter prices is described in the following account by the editor of the Elgin Dairy Reporter:

"Between 800,000 and 1,000,000 pounds of butter are marketed each week by the members of the board of trade upon the basis of the price fixed each week at our board meeting.

"This price-making factor extends very much beyond the limits of the members of the board, as a large amount of butter is contracted for by dealers all over the country upon the basis of the Elgin price. Factory men, whether members of the Elgin board or in the Elgin district, believe prices made on this board exactly represent the value of their goods. That is the price at which they will go into consumption, and therefore insist upon a contract, for they do a large amount of business on the basis of the Elgin price.

"The determining factor in making this price is the quotation committee, which is a permanent body composed of different members, who serve for 6 months at a time.

"The members of this body represent all interests—the manufacturing, the selling, and the buying.

"As a rule, the factory men on Monday morning receive their orders and know what conditions prevail in the trade all over the country. Wires are received also from all over the country. Bids are frequently made on the board, even if there are no sales.

"Taking these facts into consideration, the committee determines the price at which they think guaranteed Elgin creamery butter will go into consumption, making the price as high as in their judgment the market will respond to. There are sales on the board at times one-half to 1 cent above or below the price fixed by the quotation committee, or there are times when individuals can afford to pay one-half or 1 cent more for a certain amount of goods than the general market would sustain. And then, again, there are times when the buyers have a bearish tendency and will offer a less figure than the market, and the other party, sometimes having the same feeling, will sell rather than take chances for the future.

"Summing up the situation in that respect, the conditions of the market, the amount of goods needed, and the amount of goods for sale are the determining factors which enable the quotation committee to make their price.

"In regard to the goods made in other districts being classed as Elgin creamery, the method of manufacturing butter carried on in the Elgin district is generally adopted in the best creameries throughout the whole country, and butter outside must be such as will grade what the real Elgin product sells at under the name of Elgin.

"There is no trade-mark here by which buyers could determine whether the goods were made in the Elgin district and by a member of the Elgin board or not. But the method of grading butter has become so general and uniform that butter that will grade with the best Elgin product is frequently, and we may say almost generally, sold as Elgin creamery in many markets of the country. Members of the Elgin board have factories in Illinois, Wisconsin, and Iowa. Their goods are supposed to be uniform and of a high grade in the commercial world. Therefore they go out regularly as Elgin goods. This has given Elgin its prominence in the markets of the world on butter.

"The high grade and standard adopted by the board must be reached by all who desire to secure the benefits of our prices.

"Another thing that has helped to make Elgin butter of the high grade that it is has been the education of the farmer in the making of good milk. Not so much as to its percentage of butter fat, but as to the care and cleanliness with which the product was handled from the beginning.

"Care of the cows and of the stables have all been brought up to the highest standard. Therefore our creamery men have had the best of raw product to work from.

"The establishment of the Borden Condensed Milk Company in our city has had much to do with the care of the milk. The requirement of the condense company of the farmers, to furnish milk of the highest quality, has been very rigid. This fact having been established in the early history of the dairy industry, that same influence went out among the farmers who were furnishing milk to the creameries and cheese factories, resulting in a higher grade of raw product than is usual in many sections where these requirements are not made.

"I have gone into this matter somewhat more fully than I had intended in the beginning; but there are so many phases of this butter question in connection with our Elgin Board of Trade that it would take quite a volume to give the whole data in detail.

"However, I trust the facts that I have laid before you will enable you to make up your report so that parties will fully understand why Elgin butter is such a factor in the dairy world."

The following table of Elgin butter prices for 14 years shows one fact very clearly—that the course of prices of the best quality of western butter has been steadily set during these 14 years, from 1886 to 1899, in favor of the consumer. The downward movement which one notices by following the January prices through this series of years is, however, not so great in the months of September, October, and November. The fall of Elgin wholesale quotations in these months from 1886 to 1899 averages but two-thirds of a cent per pound lower in the last than in the first of these years. For other than these months the decline is considerable. The producer has therefore not suffered in view of the maintenance of a price during part of the year, and the consumer has gained by its fall during other portions—the greater portion of the year. On the whole, however, there has been an all round lowering of prices paid the producer.

Monthly and yearly average prices of Elgin butter, Elgin Board of Trade quotations, for 14 years.

[Compiled by D. W. Willson.]

Month.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
January......	32⅞	30⅜	32⅛	26⅝	27⅛	26¾	30	32	24¾	23.9	21⅛	19⅛	19.6	18.6
February	33	27¾	29¼	29½	26¾	28¼	21¼	27⅝	26	22.9	19.3	20.2	19.6	21
March	31¼	31	29⅛	26¼	24½	31	28⅛	27⅞	21.8	18¾	21⅛	19¼	18¾	20.1
April.........	28⅞	25¼	25¾	24⅛	18⅛	25¾	22¼	29	20½	19.4	15.6	17.2	18.6	19.1
May..........	17	19¼	22⅛	16⅞	16⅜	22	18⅞	22¾	16½	17¼	15.9	14.4	15.8	16.9
June.........	16	18⅜	19	16½	15	17⅜	18⅝	19⅝	17	17.6	14	14.4	15⅞	18
July..........	18½	20⅝	19⅛	15⅞	16⅞	17	20⅛	18¼	18¼	17.4	14.7	14½	16½	17.8
August.......	21⅜	25⅞	20	18	21⅜	20½	23¼	23⅜	23⅛	20.1	15¾	16¼	18.6	19.5
September ...	25⅝	23⅜	23½	23⅛	25⅛	24⅜	25	27¼	24⅛	21.2	15.3	19⅛	19⅛	22.1
October	27⅛	25¾	25¼	23⅛	24¾	29⅜	26⅜	28⅛	22⅜	22.1	19.1	22¼	21.1	23.5
November ...	27⅝	29	34⅜	25⅜	27⅛	28¼	30½	26¼	24¾	22.3	20.4	22⅛	22	25.4
December....	30⅜	31¾	32⅞	27⅛	28½	28¼	30	27¼	23.8	24.8	21.4	21.6	20.6	26.3
Yearly averages...	25⅝	25⅜	26¼	22¾	22⅜	25	25¼	25⅞	22	20.6	17.8	18.4	18.8	20.6

7. WEEKLY PRICES OF BUTTER ON THE ELGIN BOARD OF TRADE, 1880-1899.

Date.	Price.	Date.	Price.	Date.	Price.	Date.	Price.
1880.		1880.		1880.		1880.	
Jan. 6.....	34½-35	Apr. 27.....	21 -23	Aug. 17.....	24½-25	Dec. 7.....	35 -36¼
13.....	34 -35	May 4.....	21 -22	24.....	24¾-27	14.....	35½-36
20.....	32½-34	11.....	21 -22	31.....	25 -26½	21.....	34 -35
27.....	31½-32¼	18.....	21 -22	Sept. 7.....	26¾-27	28.....	32½-33
Feb. 3.....	32 -32½	25.....	20 -21	14.....	30		
10.....	33½-34	June 1.....	18 -19	21.....	30 -30½	1881.	
17.....	34¾-36	8.....	18 -18½	28.....	30 -30½	Jan. 4.....	32
24.....	37 -38	15.....	19 -20½	Oct. 5.....	29½-30	11.....	31 -32
Mar. 2.....	35½-36	22.....	20 -21	12.....	29 -29½	18.....	31½-32
9.....	32½-33	29.....	20 -20½	19.....	28½-29	25.....	32 -32½
16.....	34 -35	July 6.....	21 -21½	26.....	28 -29	Feb. 1.....	31 -32½
23.....	35 -35½	13.....	22 -23	Nov. 2.....	Election.	8.....	32 -32½
30.....	34 -34¾	20.....	24 -25	9.....	30 -31	15.....	32 -32½
Apr. 6.....	28 -30	27.....	26	16.....	32 -33	22.....	32 -32½
13.....	25½-27	Aug. 3.....	26 -26½	23.....	33½-35	Mar. 1.....	32½
20.....	22 -25	10.....	25½-26	30.....	34 -35½	8.....	32 -32½

7. *Weekly prices of butter on the Elgin board of trade, 1880–1899*—Continued.

Date.	Price.	Date.	Price.	Date.	Price.	Date.	Price.
1881.		1882.		1884.		1885.	
Mar. 15	32½	Sept. 25	29¼-31½	Mar. 24	34½-35	Oct. 5	21
22	32½-32¾	Oct. 2	31 -32	31	31	12	24
29	32½-32⅝	9	33 -33½	Apr. 7	29½-30	19	27½-28⅝
Apr. 5	Election.	16	35¼-36	14	29½-31	26	30½-30¾
12	31 -32	23	38½-39	21	28 -28½	Nov. 2	30
19	30 -31	30	38 -40	28	23½-25	9	27 -27½
26	29	Nov. 6	37½-38½	May 5	21 -22	16	27 -27½
May 3	24 -25	13	36½-37	12	22 -22½	23	27
10	21 -22	20	35¼-37	19	20 -20½	30	30
17	21 -22	27	38 -38¼	26	19½-20	Dec. 7	32
24	22	Dec. 4	40	June 2	19¾-20	14	40
31	19½-21	11	41½-42¼	9	20½	21	40 -40½
June 7	18½-19	18	42 -42½	16	20 -20½	28	38
14	20 -20¾	25	42	23	20 -20¼		
21	21 -22			30	19½-20½	1886.	
28	21 -22	1883.		July 7	18½	Jan. 4	32½-33
July 5	21½-22½	Jan. 2	40 -41	14	18¾-19	11	33
12	22 -22½	8	39	21	19 -19¼	18	32½-33¼
19	20½-21½	15	37 -37½	28	21 -22½	25	32¾-33
26	22 -22½	22	....	Aug. 4	23 -23½	Feb. 1	32¾-33¼
Aug. 2	24½-25	29	36 -37	11	23	8	33
9	25 -25½	Feb. 5	37 -37½	18	22	15	33
16	26½-27½	12	39¼-40¼	25	22 -22½	22	33
23	27½-29½	19	40	Sept. 1	23 -23½	Mar. 1	31 -31½
30	30	26	40	8	24 -24½	8	31 -31¼
Sept. 6	31 -32	Mar. 5	35	15	25 -25¼	15	31 -31½
13	32½-33	12	31 -35	22	30 -30¼	22	31
20	34	19	31 -32	29	30½-30⅝	29	31¼
27	34	26	28 -30	Oct. 6	30	Apr. 5	33 -35
Oct. 4	34	Apr. 2	28 -29½	13	31 -32½	12	31½-32
11	35	9	26½-28	20	30 -31	19	25 -26
18	35 -35¼	16	27 -27¼	27	31 -31½	26	20
25	35	23	27½-28	Nov. 3	31	May 3	19½-20
Nov. 1	34½-35	30	28 -29	10	28½-30	10	18
8	35 -35½	May 7	27 -28	17	28 -30¼	17	17
15	36 -37	14	22½-24	24	30	24	15½-16
22	37 -38	21	19 -21½	Dec. 1	29½-30	31	15 -16
29	40 -40½	28	20 -20½	8	30	June 7	16
Dec. 6	42 -43	June 4	20 -20½	15	28	14	16
13	40 -45	11	19 -20½	22	30 -30½	21	16
20	40 -41	18	21½-22	29	33¼-34	28	16
27	40½-41	25	22 -22¼			July 5	16½
		July 2	21 -21½	1885.		12	16½-17
1882.		9	21 -21¼	Jan. 5	34 -34½	19	19½-20
Jan. 3	40½-41	16	19¼-20¼	12	34	26	19½-20
9	40	23	19½-20¼	19	34 -34½	Aug. 2	19½-20
16	40	30	19½-20	26	34½	9	20 -20½
23	39 -40	Aug. 6	19 -20¼	Feb. 2	34¾-35	16	22 -22½
30	40 -40½	13	21 -21½	9	34	23	23
Feb. 6	41 -43½	20	20½-21½	16	33	30	23 -24¼
13	47 -48	27	21 -22	23	33	Sept. 6	24 -25
20	48 -50	Sept. 3	24 -25	Mar. 2	32½-33	13	25 -25¼
27	44 -45	10	26 -26½	9	30	20	25 -25½
Mar. 6	39 -40	17	28 -29¼	16	27½-28	27	26½-27
13	40	24	29 -29¼	23	26 -26½	Oct. 4	27 -28
20	38 -40	Oct. 1	29 -29¼	30	25 -25¼	11	28
27	41 -42	8	29 -29¼	Apr. 6	25	18	27 -28
Apr. 3	42 -43	15	29	13	25 -25¼	25	27
10	39 -40½	22	29	20	26½	Nov. 1	26 -27
17	33	29	30	27	25½-26	8	27½-27¾
24	27 -28	Nov. 5	34 -34¼	May 4	24 -24¼	15	27½-28
May 1	27 -28	12	35 -35¼	11	22 -23	22	27½
8	27 -28	19	38 -40¼	18	21	29	28 -28¾
15	24 -25	26	40¼-41¼	25	18	Dec. 6	28½
22	23½-24	Dec. 3	40¼-41	June 1	15½-16	13	30
29	25 -25½	10	37 -38	8	17¼-17½	20	30 -30½
June 5	23½-24	17	38 -38½	15	17¼-17½	27	32
12	24½-26½	24	38 -38¼	22	17½-18		
19	24 -25½	31	38	29	18	1887.	
26	23 -24			July 6	17½	Jan. 3	32
July 3	24 -24½	1884.		13	17¼	10	32 -33
10	24 -25¼	Jan. 7	38	20	17¼	17	30 -32
17	24 -25	14	37½-38	27	17½-18	24	28 -30
24	23 -23½	21	37 -38	Aug. 3	20 -20½	31	28
31	22 -22½	28	35	10	21 -21⅝	Feb. 7	27
Aug. 7	22 -22¾	Feb. 4	35	17	21 -21½	14	25 -27
14	22 -24½	11	34	24	21 -21½	21	26½-27
21	27 -28	18	33	31	23	28	30 -31¼
28	30 -32	25	33 -34	Sept. 7	23 -23½	Mar. 7	31
Sept. 4	31½-32	Mar. 3	37 -37½	14	23	14	31
11	31 -32	10	36 -37½	21	22½	21	31
18	28 -28½	17	35 -35½	28	21	28	31

7. *Weekly prices of butter on the Elgin board of trade, 1880–1899*—Continued.

Date.	Price.	Date.	Price.	Date.	Price.	Date.	Price.
1887.		1888.		1890.		1891.	
Apr. 4.....	28 -29	Oct. 1.....	24	Mar. 17.....	24½-25	Sept. 14.....	25
11.....	24 -25	8.....	24	24.....	23½-24	21.....	25 -25¼
18.....	23	15.....	26	31.....	22½-23	28.....	25
25.....	22	22.....	27	Apr. 7.....	19 -20	Oct. 5.....	26½-27
May 2.....	22	29.....	27 -27½	14.....	18	12.....	30
9.....	21	Nov. 5.....	27	21.....	18	19.....	32
16.....	19 -20	12.....	29½	28.....	18 -18¼	26.....	32
23.....	17 -18	19.....	34 -34⅜	May 5.....	18	Nov. 2.......	28
30.....	17	26.....	41 -41⅜	12.....	16½-17½	9.....	28
June 6.....	17	Dec. 3.....	40	19.....	15 -15½	16.....	28 -28¼
13.....	18¼-18½	10.....	32 -33½	26.....	14	23.....	28
20.....	18⅜-18⅝	17.....	32 -33	June 2.....	13½-14	30.....	29
27.....	18½	24.....	32	9.....	14	Dec. 7.....	29
July 5.....	19 -19¼	31.....	30 -31	16.....	14½-15	14.....	28
11.....	19 -19½	1889.		23.....	15½-16	21.....	28 -28¼
18.....	20 -21½	Jan. 7.....	27 -28	30.....	15½-16	28.....	28
25.....	22⅛-22⅜	14.....	25 -27	July 7.....	15½-16	1892.	
Aug. 1.....	27 -27¼	21.....	25 -26	14.....	16	Jan. 4.....	28½-29½
8.....	27	28.....	27	21.....	15¼-16	11.....	30
15.....	27	Feb. 4.....	29 -30½	28.....	17 -17½	18.....	30 -30¼
22.....	25 -26	11.....	30	Aug. 4.....	20	25.....	30⅞-31
29.....	23 -25	18.....	30	11.....	20¼-20½	Feb. 1.....	29 -30
Sept. 5.....	22½-24	25.....	28 -29	18.....	22¼	8.....	29 -30
12.....	23 -24	Mar. 4.....	28	25.....	23½-24	15.....	28½-29
19.....	23	11.....	27	Sept. 1.....	24	22.....	29 -29¼
26.....	24 -24¼	18.....	25 -26	8.....	22 -23	29.....	29 -29¼
Oct. 3....	25 -25¾	25.....	25	15.....	21 -22	Mar. 7.....	27¼-29
10.....	26	Apr. 1.....	25	22.....	22½	14.....	27½-28½
17.....	26	8.....	25	29.....	23	21.....	28 -28½
24.....	25 -26	15.....	25 -25¼	Oct. 6.....	24	28.....	28 -28½
31.....	26 -26¾	22.....	24 -25	13.....	24½	Apr. 4.....	25
Nov. 7.....	27½-28	29.....	22	20.....	24½-25	11.....	22
14.....	28	May 6.....	18	27.....	25 -25½	18.....	22
21.....	29½-30	13.....	15	Nov. 3.....	27	25.....	21 -21½
28.....	31	20.....	16	10.....	27	May 2.....	20
Dec. 5.....	31	27.....	16½-17	17.....	28	9.....	20
12.....	32	June 3.....	17	24.....	28	16.....	19 -20
19.....	32 -32½	10.....	16 -16½	Dec. 1.....	28	23.....	18 -19
26.....	32	17.....	16½	8.....	28½-29	31.....	17 -18
1888.		24.....	16¾	15.....	29	June 6.....	17 -17¼
Jan. 2.....	32	July 1.....	16	22.....	28	13.....	18½
9.....	33	8.....	15¼-15⅝	29.....	28	20.....	19 -19¼
16.....	33	15.....	15½-15¾	1891.		27.....	20 -20¼
23.....	31 -33	22.....	16 -16½	Jan. 5.....	26 -27	July 5.....	20
30.....	31 -32	29.....	16	12.....	27 -27½	11.....	19½-20
Feb. 6.....	31	Aug. 5.....	16 -16½	19.....	26½-27	18.....	21
13.....	29 -30	12.....	18 -19½	26.....	26	25.....	21
20.....	28 -29	19.....	18 -19	Feb. 2.....	25	Aug. 1.....	21 -22
27.....	28	26.....	18½-19	9.....	27	8.....	24
Mar. 5.....	28	Sept. 2.....	19	16.....	29 -29½	15.....	24 -24¼
12.....	29 -29¼	9.....	21	23.....	29 -29⅝	22.....	25
19.....	29½-30	16.....	23½-23¾	Mar. 2.....	34 -35¼	29.....	25
26.....	30 -30½	23.....	25 -25¼	9.....	35	Sept. 5.....	25
Apr. 2.....	28½-29	30.....	25¼	16.....	29 -30	12.....	25
9.....	27	Oct. 7.....	25¼	23.....	29 -30	19.....	25
16.....	24 -25	14.....	24	30.....	27 -28	26.....	24½-25
23.....	24 -24½	21.....	23	Apr. 6.....	25	Oct. 3.....	24
30.....	24	28.....	23 -23½	13.....	25	10.....	25
May 7.....	24	Nov. 4.....	24½-25	20.....	25	17.....	27 -27¼
14.....	23 -24	11.....	25 -25½	27.....	27 -27¼	24.....	28
21.....	23 -23¼	18.....	25 -25¼	May 4.....	27½-28	31.....	28 -28¼
28.....	18	25.....	26 -26⅜	11.....	25	Nov. 7.....	30¾-31
June 4.....	18 -18¼	Dec. 2.....	26 -28⅜	18.....	17½-18	14.....	31
11.....	19½-20¼	9.....	28 -29	25.....	17	21.....	30
18.....	19½-20	16.....	28 -28½	June 1.....	17 -18	28.....	30
25.....	18 -19	23.....	26 -27	8.....	18	Dec. 5.....	30
July 2.....	19 -19½	30.....	27 -27¼	15.....	18	12.....	30
9.....	19	1890.		22.....	17	19.....	30
16.....	19½-20	Jan. 6.....	27 -27½	29.....	17 -17½	26.....	30
23.....	19	13.....	27	July 6.....	17	1893.	
30.....	18 -18½	20.....	26½-27½	13.....	17 -17¼	Jan. 9.....	32
Aug. 6.....	18½-19½	27.....	26½-27½	20.....	17	16.....	32½-33
13....	18½-19	Feb. 3.....	27	27.....	17½	23.....	33 -33¼
20.....	20 -20½	10.....	26½-27	Aug. 3.....	18 -18½	30.....	28
27.....	22¼-22½	17.....	26½-27	10.....	19½-20	Feb. 6.....	27½-28
Sept. 3.....	23 -23¼	24.....	26¼-27	17.....	23	13.....	27½-28
10.....	24	Mar. 3.....	25½-26	24.....	23	20.....	27 -28
17.....	24	10.....	24½-25	31.....	23	27.....	27
24.....	24			Sept. 7.....	23 -25		

7. *Weekly prices of butter on the Elgin board of trade, 1880-1899*—Continued.

Date.	Price.	Date.	Price.	Date.	Price.	Date.	Price.
1893.		1894.		1896.		1897.	
Mar. 6	26	Sept. 3	23½	Feb. 17	19	Aug. 16	16¼
13	26 -27	10	24 -24½	24	20 -21	23	18
20	28	17	24 -24½	Mar. 2	21 -22	30	18
27	30 -30½	24	25	9	21	Sept. 6	17
Apr. 3	30 -30¼	Oct. 1	25	16	21	13	17½
10	25½-2∞	8	23	23	21	20	20
17	28	15	23 -23¼	30	20	27	22
24	33	22	20 -21	Apr. 6	18	Oct. 4	22
May 1	25 -28	29	22 -22½	13	17	11	22
8	24 -25	Nov. 5	23	20	14 -15	18	22
15	20 -23	12	25 -25½	27	14 -15	25	23
22	20 -21	19	25 -25¼	May 4	15½	Nov. 1	23
29	19	26	25	11	15½-16	8	23
June 5	18½-19	Dec. 3	24 -25	18	15½	15	22½
12	20¼-20⅜	10	23	25	15 -16	22	22
19	19½-20	17	23	June 1	15½	29	22
26	20	24	23	8	15 -15½	Dec. 6	22½
July 3	20	31	25	15	15	13	22
10	19¾-20			22	14 -15	20	21
17	20	1895.		29	14½-15	27	21
24	20	Jan. 7	25	July 6	15		
31	20	14	24½-25	13	15	1898.	
Aug. 7	22 -22¼	21	23½-24	20	14½-15	Jan. 3	21
14	24 -25	28	22½-23	27	14 -15	10	20
21	24½	Feb. 4	22½-23	Aug. 3	14¼-14½	17	19
28	24½	11	23 -23½	10	15 -15½	24	19
Sept. 4	25	18	-23	17	17	31	19
11	27	25	21½-22	24	17	Feb. 7	19
18	27	Mar. 2	18	31	16 -17	14	19
25	28½-28⅝	11	18 -19	Sept. 7	15 -16	21	19½
Oct. 2	28½-29	18	18	14	15	28	20
9	29	25	19½-20	21	15	Mar. 7	19½
16	29	Apr. 1	20	28	15½	14	18½
23	28	8	20	Oct. 5	16½	21	18½
30	27½-28	15	20 -20¼	12	20	28	18½
Nov. 6	27 -28	22	19½-20	19	20	Apr. 4	20
13	25	29	17½-18	26	19 -20	11	20
20	25	May 6	17	Nov. 2	18 -19	18	17
27	26 -26¼	13	16	9	18½-19	25	16½
Dec. 4	27½-27¾	20	18	16	20 -20½	May 2	16½
11	28 -28¼	27	18	23	21 -22	9	16
18	28	June 3	17½	30	23 -23¼	16	15
23	27	10	17½-18	Dec. 7	24 -24½	23	15½
30	26½-27	17	17½	14	20 -20½	28	16
		24	17¼-17½	21	20 -21	June 6	15½
1894.		July 1	17	28	20½	13	16
Jan. 8	24 -24½	8	17			20	16
15	24½	15	17	1897.		27	16
22	24½-25	22	18	Jan. 4	19 -19⅝	July 2	16
29	26	29	18	11	19 -19½	11	16
Feb. 5	27	Aug. 5	20	18	19½-19⅝	18	16½
12	26 -27	12	20	25	19½-20½	25	17½
19	27	19	20 -20½	Feb. 1	20½-20¾	Aug. 1	18½
26	24 -25	26	20	8	21	8	18½
Mar. 5	22 -23	Sept. 2	20 -20⅛	15	20½-21	15	18½
12	22	9	21	22	18	22	18
19	22	16	21	Mar. 1	18	29	18
26	20	23	22 -22¼	8	18	Sept. 5	18
Apr. 2	21 -21⅛	30	22	15	18	12	20
9	22 -22½	Oct. 7	22	22	18 -18⅜	19	20
16	23	14	22	29	22 -22½	26	20
23	19 -20	21	22	Apr. 5	20	Oct. 3	20
30	16½-18	28	22	12	16½-18	10	20
May 7	15 -16	Nov. 4	22 -22½	19	16 -16½	17	21½
14	17 -17¼	11	22	26	16	24	22
21	17	18	22	May 3	14 -15	31	22
28	17	25	23	10	14½	Nov. 7	22
June 4	16½	Dec. 2	24 -24½	17	13⅜	14	22
11	17 -17½	9	26	24	15	21	22
18	17	16	27	31	14 -15	28	22
25	16¾-17	23	24½-25	June 7	14½-14⅝	Dec. 5	22
July 2	16½	30	23	14	14	12	20½
9	16½-17			21	14¼	19	20½
16	16½-17	1896.		28	14½	24	20½
23	18 -18½	Jan. 6	23 -23½	July 3	14½	31	20½
30	23 -23½	13	23	12	14½		
Aug. 6	23½	20	19¼-20	19	14½-14⅝	1899.	
13	23½	27	20	26	14½	Jan. 9	20½
20	23½	Feb. 3	19 -20	Aug. 2	14½	16	18½
27	23½	10	18 -18½	9	14½	23	18

7. Weekly prices of butter on the Elgin Board of Trade, 1880–1899—Continued.

Date.	Price.	Date.	Price.	Date.	Price.	Date.	Price.
1899.		1899.		1899.		1899.	
Jan. 30	18½	May 1	16	July 31	17½	Oct. 30	23½
Feb. 6	20	8	16	Aug. 7	18	Nov. 6	24½
13	22	15	18	14	20	13	25
20	21	22	17	21	20	20	25½
27	21½	29	17½	28	20	27	26½
Mar. 6	20	June 5	18	Sept. 5	21	Dec. 4	26½
13	20	12	18	11	22½	11	26
20	20	19	18	18	22½	18	26
27	20½	26	18	25	22½	23	26
Apr. 3	20½	July 3	18	Oct. 2	23½	30	27
10	20½	10	18	9	23½		
17	18½	17	18	16	23½		
24	17	24	17½	23	23½		

8. COMPARATIVE WHOLESALE PRICES OF BUTTER, WEEKLY, AT NEW YORK AND CHICAGO, 1896–1899.

[Compiled by D. W. Willson.]

Prices each Monday.

Date.	New York price.	Chicago price.	Date.	New York price.	Chicago price.
1896.			1897.		
Jan. 6	25	24	Jan. 4	20	19
13	24	23½	11	20	19
20	21	20	18	20	19½
27	21	19½	25	20	19½
Feb. 3	18 -19	19½	Feb. 1	20	20
10	19	18½	8	20½	20½
17	19	18½	15	21 -21½	20½
24	21	20½	22	....	....
Mar. 2	21½-22	21½	Mar. 1	19	18
9	22	21½	8	19	18
16	25	21	15	19	18
23	22	21	22	19	18½
30	21 -22	21	29	20 -20½	19½
Apr. 6	19	19	Apr. 5	22	20
13	17	17½	12	18	17½
20	15	15	19	17	16½
27	15	14	26	17	16
May 4	16	15	May 3	17	16
11	16	15	10	15	15
18	15½	15	17	14	14
25	15½-16	15	24	15	14½
June 1	15½	15	31	....	....
8	15½	15	June 7	15	14½
15	15½	14½	14	15	14½
22	15 -15½	14½	21	15	14½
29	15½	14½	28	15	14½
July 6	15	14½	July 3	15	14½
13	15	14½	12	15	14½
20	15	14½	19	15	14½
27	15	14	26	15	14½
Aug. 3	15	14	Aug. 2	15	14½
10	15½	15	9	15	14½
17	16	15½	16	16	16
24	16	16½	23	18½	18
31	16½	16	30	19	18½
Sept. 7	....	....	Sept. 6	18	17½
14	16	15	13	18	17½
21	15½	14½	20	20	19½
28	16	15	27	21	20½
Oct. 5	17	15½	Oct. 4	22	22
12	19	18	1	22	21½
19	20	18	18	23	22
26	20	19	25	24	23
Nov. 2	20	19	Nov. 1	23½	23
9	20	19	8	23 -23½	23
16	21	20	15	22½-23	22½
23	22	21	22	22½-23	21
30	23	22	29	22	22
Dec. 7	24	23	Dec. 6	23½	22
14	21	22	13	23	22
21	22	21	20	22	21
28	22	21	27	22	21

8. *Comparative wholesale prices of butter, weekly, at New York and Chicago, 1896–1899*—Continued.

Date.	New York prices.	Chicago prices.	Date.	New York prices.	Chicago prices.
1898.			1899.		
Jan. 3	22	21	Jan. 9	21	20 -20½
10	20	20	16	20	18½
17	20	19	23	19	18
24	20	18½	30	19	18
31	20	18½	Feb. 6	19 -19½	18½
Feb. 7	20	19	13	22	21½-22
14	20	19	20	21½-22	22
21	20	19	27	21	20½-21
28	20½	20	Mar. 6	20	19 -19½
Mar. 7	20	20	13	20	19 -19½
14	19	18½	20	20	19½-20
21	19	18	27	22	20½-21
28	19 -19½	18½	Apr. 3	21½	20
Apr. 4	21	20	10	21	19½-20
11	21	20	17	19	19
18	18	17	24	17	16
25	17	16½	May 1	17	16
May 2	17	16½	8	17	16
9	17	16	15	19	18
16	15	15	22	18	17½
23	16	15	29	18½	17½
28	16½	16	June 5	18½	17½
June 6	16	15½	12	18½-18¾	18
13	17	16	19	19	18
20	17	16	26	18½-19	18
27	17	16	July 3	18½-18¾	18
July 2	16½-17	16	10	18½	17½
11	16½-17	16	17	18½	17½
18	17	16½	24	18	17
25	18	17½	31	18	17
Aug. 1	19	18	Aug. 7	18½	18
8	19	18½	14	20	19½
15	19	18½	21	21	20
22	18½	17	28	21	20
29	18½	17	Sept. 5	21	20
Sept. 5	18½	17 -18	11	23	22
12	20	18½-19	18	23	22
19	21	19½-20	25	23 -23½	22½
26	20½-21	19 -19½	Oct. 2	24	22½
Oct. 3	20 -20½	19 -19½	9	24	23
10	21	19½-20	16	24	23
17	22½	20½-21	23	23½-24	22
24	23	20½-22	30	24	23
31	23	21 -22	Nov. 6	25	24
Nov. 7	23	21 -21½	13	25 -25½	24½
14	23½	21½-22	20	26	25
21	23½	21 -21½	27	27 -27½	26
28	23½	21½	Dec. 4	27 -27½	26
Dec. 5	20	21 -21½	11	27	26
12	20½-21	19 -19½	18	27	25
19	21	19½-20	23	27	25½
24	21	19½-20½	30	28	27
31	21	20½			

9. COMPARATIVE WHOLESALE PRICES OF BUTTER, WEEKLY, AT BOSTON AND PHILADELPHIA, 1896–1899.

[Compiled by D. W. Willson.]

Prices each Monday.

Date.	Boston prices.	Philadelphia prices.	Date.	Boston prices.	Philadelphia prices.
1896.			1896.		
Jan. 6	25	24	Mar. 30	22 -22½	22
13	25	24	Apr. 6	20½	20 -20½
20	23½	22	13	19	18
27	22	20	20	16½-17	16
Feb. 3	22	20	27	15 -16	15
10	21	20	May 4	16 -16½	16
17	21	20	11	16	16
24	22 -23	21	18	15½	16
Mar. 2	23	22	25	16	16
9	21½	22	June 1	16	15½
16	22½	22	8	16	16
23	22 -22½	22	15	16	15½

9. *Comparative wholesale prices of butter, weekly, at Boston and Philadelphia, 1896–1899*—Continued.

Date.		Boston prices.	Philadelphia prices.	Date.		Boston prices.	Philadelphia prices.
1896.				1898.			
June	22	16	15¼	Jan.	3	22	22½
	29	16	15¼		10	22	22
July	6	16	15¼		17	21	20
	13	15½	15½		24	21	20
	20	15½	15½		31	21	20
	27	15¼	15½	Feb.	7	21	20½
Aug.	3	15¼	15½		14	21	20 -20½
	10	15¼	15½		21	21	20 -20½
	17	16	15½		28	21½	21
	24	16 -16½	16	Mar.	7	21½	21
	31	16¼-17	16½		14	20 -21	20
Sept.	7	....	16½		21	20½	20
	14	16 -16¼	16½		28	20½	20
	21	15½-16	15 -15½	Apr.	4	21½	21
	28	16	16		11	22	22
Oct.	5	16½-17	16½		18	20	19
	12	18	18		25	18	18
	19	18 -20	19½	May	2	17½	17½
	26	18 -20	20		9	17	17
Nov.	2	18 -19	20		16	16	16
	9	18 -19	20		23	16	15½
	16	20	21½-22		28	16½-17	16½
	23	21	22	June	6	16½	16½
	30	21	23		13	16½-17	17
Dec.	7	23	24½		20	17 -17½	17½
	14	23	23		27	17 -17½	17½
	21	22 -23	22	July	2	17	17½
	28	22 -23	22½		11	17	17½
1897.					18	17	17½
Jan.	4	22	21		25	18	18½
	11	21	20¼	Aug.	1	18½	19½
	18	21	21		8	18½	20
	25	21	20		15	19	20
Feb.	1	21	20 -20½		22	19	19
	8	21 -22	21½		29	19	18½
	15	22	20½	Sept.	5	19	18½
	22	....	20		12	19 -19½	20
Mar.	1	20	19		19	20 -21	21
	8	20	19		26	21	21
	15	20	19	Oct.	3	20	20¼
	22	20	20		10	20½-21	21
	29	20 -21	20½		17	21	22½
Apr.	5	22	22		24	21	23
	12	20	19		31	21	23
	19	18	18	Nov.	7	21	23
	26	18	18		14	21	23
May	3	17¼	17½		21	21	23
	10	17	16		28	21	23
	17	15	14½	Dec.	5	21	23
	24	15	14½-15		12	21 -22	22
June	7	15 -15¼	15 -15½		19	21 -22	22
	14	15	15 -15½		24	22	22
	21	15¼	15		31	22	22
	28	15 -16	15	1899.			
July	3	15 -16	15	Jan.	9	21 -22	21
	12	15 -16	15		16	20 -21	20
	19	15 -16	15		23	19½-20½	19
	26	16	15		30	19 -20	19
Aug.	2	16	15½	Feb.	6	20	19½
	9	16	16		13	22	25
	16	16	16		20	22	23
	23	18	18		27	22	22½
	30	19	18	Mar.	6	21	20
Sept.	6	19	17 -18		13	21	20
	13	18¼	17		20	21	21
	20	20	20		27	22	22
	27	20¼-21	21	Apr.	3	21	22
Oct.	4	22	22		10	21	22
	11	22	22		17	19 -20	19½
	18	23	22		24	18	18
	25	23	23	May	1	17	17¼
Nov.	1	23	24		8	17	17¼
	8	22	23¼		15	18 -18¼	18¼
	15	21	23½		22	18 -18¼	18¼
	22	21	23½		29	19	18¼
	29	21	23½	June	5	19	18¼
Dec.	6	23	24		12	19	18¼
	13	23	23½-24		19	19	18¼-19
	20	22	22		26	19	19
	27	22	22½	July	3	19	18¼-19

9. Comparative wholesale prices of butter, weekly, at Boston and Philadelphia, 1896–1899—Continued.

Date.	Boston prices.	Philadelphia prices.	Date.	Boston prices.	Philadelphia prices.
1899.			1899.		
July 10	18¼-19	18½-19	Oct. 9	24	24
17	19	19	16	24	24
24	18 -18½	18½-19	23	24	24
31	18½	18¾	30	24	24
Aug. 7	18 -19	18½-19	Nov. 6	24	24½
14	19½-20	19½-20	13	25	25½
21	21	21	20	26	26½
28	21	21	27	27	27
Sept. 5	22	21	Dec. 4	27 -28	27
11	23	23	11	27 -27½	27
18	23	23	18	27	27
25	23 -24	23	23	27	27½
Oct. 2	23 -24	23	30	28	28½

10. STATISTICAL POSITION OF REPRESENTATIVE MARKETS.

The New York market is the leading Eastern market for the three different purposes for which its dairy receipts are destined—namely, for city consumption, for home trade, and for export,

Comparing receipts at New York with exports, we get a balance for local consumption and the home trade. These figures are available for butter for the years 1883 to 1897, or a period of 15 years.

(1) Consumption and home distribution of butter received at New York, 1883-1897.

Year ending October 1—	Receipts at New York.	Exports from New York.	Consumed and distributed at home.	Per cent exports.	Per cent retained.
	Pounds.	*Pounds.*	*Pounds.*		
1883	90,547,910	18,811,400	71,736,510	20.8	79.2
1884	80,117,170	15,865,600	64,251,570	19.8	80.2
1885	93,566,850	14,601,550	78,965,300	15.6	84.4
1886	93,701,520	11,677,750	82,023,770	12.5	87.5
1887	93,712,480	9,933,400	83,779,080	10.6	89.4
1888	195,242,360	7,000,650	188,241,710	3.6	86.4
1889	108,447,860	19,941,176	88,506,684	18.4	81.6
1890	97,655,160	20,623,534	77,031,626	21.1	78.9
1891	98,087,870	11,115,505	86,972,365	11.3	88.7
1892	91,453,520	9,083,478	82,370,042	9.9	91.1
1893	89,361,860	5,336,449	84,025,411	5.1	94.9
1894	112,548,500	8,288,670	104,259,830	7.4	92.6
1895	94,745,900	11,133,747	83,612,243	11.8	88.2
1896	113,692,480	18,540,091	95,152,389	16.3	83.7
1897	112,920,310	25,757,263	87,163,047	22.8	77.2

(2) Comparative receipts of Eastern and Western butter at New York for the years 1883 to 1897.[1]

Year ending October 1—	Eastern.		Western.		Percentage Western.
	Quantity.	Price.	Quantity.	Price.	
	Pounds.	*Cents.*	*Pounds.*	*Cents.*	
1882	44,215,000	29½	35,648,850	28	46
1883	44,804,060	26	45,743,850	26	50
1884	38,263,820	24½	49,853,350	24¼	62
1885	39,480,350	22	54,086,500	22	57
1886	38,985,520	23½	54,716,000	21½	58
1887	37,062,130	24	56,650,350	22	60
1888	31,784,410	24¾	63,457,950	22½	60
1889	30,626,610	23	77,820,650	21	73
1890	26,560,660	20	71,094,500	18	73
1891	27,671,070	21	70,416,200	21	71
1892	29,032,930	....	62,420,600	....	68
1893	30,126,460	....	59,235,400	23	66
1894	23,719,350	23	88,628,150	21	78
1895	18,601,940	20	76,144,050	19	80
1896	16,541,630	18	96,150,850	18	84
1897	14,686,560	18	98,233,750	17	87

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[1] Report New York Commission of Agriculture, 1898, Vol. I, p. 210.

The relative rank of New York as an exporting market for dairy products is shown by the following table, comparing exports from all parts in the United States, year by year, with those of the port of New York:

(3) *Comparative exports of butter for 15 years.*[1]

Year.	From all United States ports.	From port of New York.	Percentage via New York.
	Pounds.	*Pounds.*	
1883	22,375,708	18,811,400	84
1884	21,391,196	15,865,600	74.2
1885	19,593,872	14,601,550	74.5
1886	14,404,727	11,677,750	81.6
1887	12,531,171	9,933,400	79
1888	8,749,366	7,000,650	80
1889	25,983,054	19,941,176	76.7
1890	23,895,914	20,623,534	86.3
1891	14,970,538	11,115,505	74.2
1892	11,351,250	9,083,478	80
1893	6,837,289	5,336,449	78
1894	10,231,417	8,288,670	81
1895	13,935,017	11,133,747	79.8
1896	23,335,729	18,540,091	79.5
1897	35,631,967	25,757,263	72.3

[1] Report New York Commission of Agriculture, 1898, Vol. I, pp. 321, 322.

(4) *Distribution of exports of butter, 1897–1899.*

Countries.	1897.	1898.	1899.
	Pounds.	*Pounds.*	*Pounds.*
United Kingdom	20,022,410	14,801,641	10,278,788
Germany	2,834,147	1,448,806	918,262
Other Europe	2,638,485	1,141,279	972,801
British North America	1,797,089	3,809,452	1,986,083
Central American States and British Honduras	268,208	279,895	250,195
Mexico	238,595	249,079	280,924
Santo Domingo	53,051	55,816	76,547
Cuba	58,120	42,715	585,840
Porto Rico	53,525	18,900	45,706
Other West Indies and Bermuda	1,984,709	1,857,252	2,065,538
Brazil	318,787	749,653	1,420,222
Colombia	132,947	134,644	83,351
Other South America	675,295	651,563	911,943
China	25,336	21,555	22,337
Japan	87,180	115,203	92,495
Other Asia and Oceania	150,464	255,304	216,882
Africa	15,820	20,987	17,147
Other countries	11,056	36,275	22,936
Total	31,345,224	25,690,025	20,247,997

(5) *Comparative receipts of Eastern and Western cheese at New York for the fiscal years 1888–1897.*

Year ending October 1—	Eastern.		Western.		Per centage Western.
	Quantity.	Price.	Quantity.	Price.	
	Pounds.	*Cents.*	*Pounds.*	*Cents.*	
1888	98,877,955	10⅛	3,636,260	8⅛	3.3
1889	101,712,655	10	3,660,120	9	3.5
1890	102,118,115	9¾	3,483,090	8	3.3
1891	86,958,200	10	3,331,950	9	3.7
1892	91,033,950	11	4,756,510	10	5.7
1893	87,380,465	11	4,565,205	10	4.9
1894	80,671,755	10	6,384,550	9	7.3
1895	61,255,620	9¼	5,977,500	8⅛	8.8
1896	59,133,120	9⅛	5,588,520	8¼	8.6
1897	66,598,300	10	5,699,080	9	7.8

[1] Fifth Annual Report Commission of Agriculture, New York, pp. 212-232.

(6) *Consumption and home distribution of cheese received at New York, 1888-1897.*

Year.	Total receipts at New York.	Exports from New York.	Consumed and distributed at home.	Percentage exported.	Percentage retained at home.
	Pounds.	*Pounds.*	*Pounds.*		
1888	102,514,215	75,840,800	26,673,415	73.8	26.2
1889	105,372,775	75,046,326	30,326,449	71.2	28.8
1890	105,601,205	70,208,270	35,392,935	66.4	33.6
1891	90,290,150	61,299,205	28,990,845	67.8	32.2
1892	105,790,460	67,432,651	38,357,809	63.7	36.3
1893	91,945,850	53,293,060	38,652,790	57.6	42.4
1894	97,056,305	52,903,719	44,152,586	54.3	45.7
1895	67,233,120	30,692,702	36,540,418	47.1	52.9
1896	64,721,640	25,947,401	38,774,239	40.1	59.9
1897	72,973,380	42,514,776	30,458,604	58.2	41.8

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[1] Report New York Agricultural Commission, pp. 213-232.

(7) *Comparative exports of cheese for 15 years.*[1]

Years.	From all United States ports.	From port of New York.	Percentage in New York.
	Pounds.	*Pounds.*	
1883	111,973,140	97,897,850	87.4
1884	111,951,686	96,634,250	86.3
1885	95,017,243	82,934,750	87.3
1886	86,636,685	78,763,400	90.9
1887	87,069,804	72,529,500	83.3
1888	81,595,304	75,840,700	92.9
1889	98,140,486	75,046,326	76.5
1890	91,014,571	70,208,270	77.1
1891	77,148,794	61,299,205	79.5
1892	81,589,361	67,432,651	82.6
1893	67,925,712	53,293,060	78.5
1894	68,607,186	52,903,719	77.1
1895	40,610,242	30,692,702	75.6
1896	37,515,798	25,947,401	69.2
1897	61,176,207	42,514,776	69.5

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[1] Report New York Agricultural Commission, pp. 232-233.

11. BUTTER RECEIPTS AND SHIPMENTS AT CHICAGO.

The following table shows the receipts and shipments of butter at Chicago from 1853 to 1898, inclusive:

[From the Chicago Trade and Commerce.]

Years.	Receipts.	Shipments.	Years.	Receipts.	Shipments.
	Pounds.	*Pounds.*		*Pounds.*	*Pounds.*
1853	812,430	577,388	1876	33,941,573	34,140,609
1854	2,143,569	609,449	1877	41,989,905	37,040,993
1855	2,473,982	1,056,631	1878	48,379,282	44,507,599
1856	2,668,938	297,748	1879	54,623,223	51,262,151
1857	3,039,385	309,550	1880	67,337,044	59,970,601
1858	3,166,923	512,833	1881	66,270,785	56,109,762
1859	....	....	1882	66,954,045	59,927,879
1860	....	....	1883	75,333,082	76,554,902
1861	....	....	1884	83,410,144	90,660,379
1862	....	....	1885	92,474,784	96,693,890
1863	....	....	1886	108,122,119	102,658,727
1864	8,819,903	5,927,769	1887	105,209,502	102,087,869
1865	7,492,028	5,206,865	1888	105,402,121	116,185,273
1866	9,126,825	8,503,321	1889	156,315,245	157,425,605
1867	3,816,638	2,926,239	1890	140,518,850	156,688,837
1868	5,503,630	3,927,021	1891	127,765,048	140,737,620
1869	10,224,803	5,898,391	1892	134,196,828	140,494,155
1870	11,682,348	6,493,143	1893	134,843,632	149,142,492
1871	13,231,452	11,049,367	1894	144,868,216	155,062,053
1872	14,574,777	11,497,538	1895	185,452,991	176,846,168
1873	22,283,765	12,851,303	1896	237,795,243	222,004,126
1874	28,743,606	16,020,190	1897	225,651,504	206,316,440
1875	21,868,991	19,249,081	1898	222,627,535	203,432,199

Chicago as a market for dairy products.—This market represents the concentrating point at which the Western butter movements are focused, and the distributing center from which shipments are disbursed eastward and southward. The receipts and shipments here are by far the largest in the country. A study of these statistics shows how steady and yet rapid has been this trade. No such result could have come about without a highly organized trade to find markets for these surplus products of the Western farm. And no such trade could have grown up had not the product been such as to tell on its merits in competition with the products of the Eastern creameries. The trade itself of such a magnitude is a credit to the producer and the distributer alike. The figures speak for themselves.

12. CHEESE AND BUTTER MOVEMENT AT CHICAGO AND ST. LOUIS.

Receipts and shipments of cheese and butter during 1898, by routes, at Chicago.

	Cheese.		Butter.	
	Received.	Shipped.	Received.	Shipped.
	Pounds.	*Pounds.*	*Pounds.*	*Pounds.*
Lake	916,280	12,000	45,500	6,000
Chicago and Northwestern Rwy	21,649,785	1,964,056	65,188,705	2,621,816
Illinois Central R. R	5,662,438	4,020,301	16,011,836	1,570,078
Chicago, Rock Island and Pacific Rwy	28,500	1,139,850	30,168,773	549,860
Chicago, Burlington and Quincy R. R	566,743	3,010,798	19,896,573	2,747,357
Chicago and Alton R. R	56,524	179,345	439,151	954,278
Chicago and Eastern Illinois R. R	1,150	3,288,430	....	1,830,080
Chicago, Milwaukee and St. Paul Rwy	56,084,200	....	83,748,900	....
Wabash R. R	....	16,636,449	458,388	3,247,557
Chicago Great Western Rwy	34,635	304,705	1,357,298	1,190
Atchison, Topeka and Santa Fe R. R	14,930	....	907,917	....
Wisconsin Central Lines	1,409,248	....	2,665,142	....
Cleveland, Cincinnati, Chicago and St. Louis Rwy	95,003	3,643,066	148,933	4,505,827
Chicago, Indianapolis and Louisville Rwy	38,804	159,100	233,968	115,339
Michigan Central R. R	257,310	2,289,349	867,294	27,905,636
Lake Shore and Michigan Southern Rwy	2,179,810	2,182,683	216,742	30,616,310
Pittsburg, Fort Wayne and Chicago Rwy	23,216	1,412,600	....	75,095,285
Pittsburg, Cincinnati, Chicago and St. Louis Rwy	....	2,206,810	121,285	4,133,155
Baltimore and Ohio R. R	....	1,151,057	....	19,649,448
Chicago and Grand Trunk Rwy	82,183	486,767	....	20,010,743
New York, Chicago and St. Louis R. R	....	77,010	....	364,348
Chicago and Erie R. R	880,207	521,984	151,130	4,504,592
Total	89,880,966	44,986,370	222,627,535	203,432,199

Receipts and shipments of cheese and butter during 1898, by months, at Chicago.

	Cheese.		Butter.	
	Received.	Shipped.	Received.	Shipped.
	Pounds.	*Pounds.*	*Pounds.*	*Pounds.*
January	4,940,259	3,723,199	14,110,907	14,916,474
February	5,672,641	3,527,427	15,988,447	14,659,349
March	6,383,500	3,703,087	17,086,703	17,382,993
April	5,541,148	3,107,209	16,853,935	16,990,635
May	6,057,788	3,274,155	19,838,516	19,748,985
June	7,853,798	3,357,902	28,072,992	23,590,682
July	7,361,392	3,412,889	22,742,300	19,981,135
August	7,844,381	3,743,114	20,471,408	18,774,517
September	9,623,963	4,619,894	18,764,965	16,756,701
October	9,717,615	4,732,835	16,937,685	15,738,252
November	8,964,521	4,179,023	15,776,820	12,675,276
December	9,919,960	3,605,636	16,582,857	12,218,200
Total	89,880,966	44,986,370	222,627,535	203,432,199

Receipts and shipments of butter and cheese at St. Louis for 1899.

By—	Butter.		Cheese.	
	Receipts.	Shipments.	Receipts.	Shipments.
	Pounds.	*Pounds.*	*Boxes.*	*Boxes.*
Chicago and Alton R. R. (Mo. Div.)	4,470	....	1,215	5,970
Missouri Pacific R. R	3,511,865	5,930	155	14,751
St. Louis and San Francisco R. R	417,490	....	90	3,040
Wabash Railway (West)	689,830	45,010	665	20,106
Missouri, Kansas and Texas R. R	257,760	8,250	160	3,335
St. Louis Southwestern R. R	470	447,445	....	39,033
St. Louis, Iron Mountain and Southern R. R	13,165	2,239,260	20	138,012
Illinois Central R. R	1,082,010	294,310	5,375	11,231
Louisville, Henderson and St. Louis R. R	32,710	....	50	120
Louisville and Nashville R. R	13,255	3,220	40	1,286
Mobile and Ohio R. R	24,610	269,800	165	41,731
Louisville, Evansville and St. Louis R. R	1,285	13,140	....	1,051
Baltimore and Ohio Southwestern R. R	1,070	58,080	....	2,216
Chicago and Alton R. R	1,089,150	2,330	13,380	7,273
Cleveland, Cincinnati, Chicago and St. Louis R. R	200	108,730	1,030	3,149
Vandalia and Terre Haute R. R	646,860	183,290	2,500	537
Wabash Railway (East)	2,523,200	1,206,740	953,380	9,521
Toledo, St. Louis and Kansas City R. R	....	....	....	....
Chicago, Peoria and St. Louis R. R	30	....	....	....
Chicago, Burlington and Quincy R. R	1,048,000	....	....	....
St. Louis, Keokuk and Northwestern R. R	1,325,640	....	60	2,991
St. Louis, Chicago and St. Paul R. R	....	....	....	2
St. Louis, Peoria and Northern R. R	....	....	60	....
Upper Mississippi River	6,850	31,285	....	10,599
Lower Mississippi River	26,060			
Illinois River	150			
Missouri River	....			
Ohio, Cumberland and Tennessee rivers	150			
Express	1,012,305			
Total	13,729,185	1,975,490	981,345	318,960

TOTAL.

1899 pounds	13,729,185	1,975,490	981,345	318,960
1898 do	11,905,745	5,762,070	571,535	245,443
1897 do	15,253,165	5,414,335	440,805	246,139
1896 do	16,121,892	4,657,043	751,421	185,193
1895 do	15,812,095	5,086,550	172,953	185,193
1894 do	14,138,544	5,135,055	437,618	192,567
1893 do	12,575,298	4,895,303	353,230	160,188
1892 do	13,401,788	4,964,160	221,661	212,687
1891 do	13,791,258	6,875,776	188,265	165,925
1890 do	13,661,924	4,116,799	180,495	109,065
1889 do	12,822,101	1,623,378	185,414	138,699
1888 do	11,109,733	3,375,586	139,014	145,856
1887 do	9,231,043	2,221,570	109,767	106,204

13. FACTORS IN THE PRICE OF CHEESE. RELATIVE VALUE OF BUTTER AND MILK.

Canada is the largest producer of cheese in North America. The tariff on imports to the United States is 6 cents per pound for all kinds of cheese. This amounts to as much as 50 to 75 per cent of the wholesale price of the product in the United States. While a great deal of cheese from the United States goes to Canada for export to England, very little Canadian cheese enters the United States markets in competition with the domestic product. The competition between Canadian and our own cheese occurs in foreign markets, especially in Great Britain, where ours frequently passes for a Canadian product.

Within the United States the prices of cheese are determined primarily by the output of the two leading States—New York and Wisconsin. In these two States are located the leading cheese-producing centers of the United States. In the New York market Western and Eastern outputs compete, though the Eastern cheese rules a cent higher than the Western.

In the matter of production, cheese is now far more largely a factory product than a farm product. In the census of 1890 about 27,000,000 pounds of cheese was reported as made on farms, and 216,000,000 pounds as made in factories. This shows how decidedly cheese making was even then a factory industry. The tendency has been since then toward a still greater concentration of production into factories supplied by milk from the farm. The trade required a uniform product, which the farm is less apt to produce. Hence the general tendency away from the farm.

The effect of refrigerated transportation is to extend the markets and improve prices of good qualities. Kansas cheese factories formerly could do nothing with their product in the Northern markets, except during colder portions of the year. By the aid of the railroad system of refrigeration they can now supply this territory, in which they get almost as good prices as at home, once or twice or three times each week regularly throughout the year. The shipper of cheese from Kansas now uses the refrigerator system in both summer and winter; in summer, because of the heat, and in winter because of the cold, thus maintaining a uniform temperature.

The local market for Kansas cheese is still its best market, and the reduction in price has increased local consumption: but this product is also finding its way southward. About 46 per cent of the Kansas output is consumed at home; another third finds a market in Texas; about 8 per cent goes to the mining towns of Arizona and New Mexico, and several shipments have been made to Mexico.

Rates to western points from the East are so high as to give Western cheese a fair field, especially in the Southwest and the Northwest, where prices are apt to be good, though the quantity consumed must be small.

One of the causes of irregular prices of Western dairy products is its irregularity of output. The cheese product of Kansas for the past 20 years illustrates this fact—a fact which interferes much with the success of the product in maintaining a good place in the market.

Production of farm and factory cheese. Kansas, 1879–1898.

Year.	Annual output.	Year.	Annual output.
	Pounds.		*Pounds.*
1879	1,000,000	1889	500,000
1880-1882	700,000	1890	700,000
1883	600,000	1891	320,000
1884	800,000	1895	700,000
1885	500,000	1896–97	1,100,000
1886–1888	400,000	1898	1,400,000

Average monthly and yearly price of milk and butter from 1895 to 1899, inclusive, also the number of quarts of milk required to purchase 1 pound of butter.[1]

Month	1895.			1896.			1897.		
	Average price.		Quarts milk.	Average price.		Quarts milk.	Average price.		Quarts milk.
	Milk.	Butter.		Milk.	Butter.		Milk.	Butter.	
January	2.87	24.86	8.66	3	22.75	7.58	2.75	20	7.3
February	2.68	23.93	8.93	2.75	19.5	7	2.63	20.5	7.8
March	2.37	20.02	8.45	2.5	22	9	2.37	19.3	8.15
April	2.25	20.6	9	2.13	16.5	7.7	2.13	18.5	8.7
May	2.12	17.25	8.1	2	15.7	7.88	2	15	7.5
June	2	18.5	9.25	1.87	15.5	8.3	1.75	15	8.6
July	2	18.4	9.2	2	15	7.5	1.91	15	7.7
August	2.50	20	8	2.13	15.8	7.4	2	16.7	8.35
September	2.63	21.2	8	2.08	16	7.7	2.25	19	8.44
October	3	22	7.33	2.12	19	8.9	2.5	22.25	8.9
November	3	23	7.7	2.75	21.2	7.7	2.83	22.6	8
December	3	23	7.7	2.75	22.25	8	3	22.6	7.5
Average price per year	2.53	21	8.3	2.34	18.41	7.9	2.35	18.87	8

Average monthly and yearly price of milk and butter from 1895 to 1899, etc.—Cont'd.

Month.	1898.			1899.		
	Average price.		Quarts milk.	Average price.		Quarts milk.
	Milk.	Butter.		Milk.	Butter.	
January	2.75	20.4	7.4	2.75	19.75	7.2
February	2.6	20	7.7	2.5	21	8.1
March	2.38	19.38	8.1	2.5	21	8.4
April	2.25	19.25	8.5	2.25	19.6	8.72
May	2.12	16.3	7.7	2.12	18	8.5
June	1.75	17	9.7	2	18.75	9.4
July	2	17.13	8.57	2.17	18.3	8.4
August	2.25	19	8.41	2.25	20	9
September	2.45	20	8.2	2.5	22.75	9.1
October	2.5	22	8.8	2.85	24	8.4
November	2.63	23.4	8.9	3.25	26	8
December	3	21	7	3.25	27.2	8.37
Average price per year	2.38	19.57	8.2	2.53	21.36	8.44

[1] From *The Milk Reporter*. The figures apply to New York territory.

14. EXPORT TRADE IN DAIRY PRODUCTS.

Our export trade in dairy products should on general principles be the best in the world, owing to our rich supply of pasturage, corn, and fodder of various kinds on which dairying is dependent. Yet quite the contrary is the fact. Our extra creamery butter sold from 3 to 6½ cents lower than the best Dutch butter in the London markets for the year 1897.[1]

Of course our butter competes, but it stands at a disadvantage compared with Continental butter. Much of this disadvantage is due to the fact that foreign markets have received our inferior grades of surplus butter so long that they have come to believe that we have nothing better to send.

Possibly no part of our dairy trade has been so long in learning to adapt itself to the consumer's wants. This accounts, to some extent, for the irregular volume of trade in this species of product. But the main cause of this irregularity is to be assigned to the practice of cultivating a foreign demand only when the surplus became oppressive at home. For more than a century we have sent abroad annually from 1,000,000 to 40,000,000 pounds of butter, mostly of inferior grades, and latterly substitutes for butter. This inferiority of exported quality and fluctuations in quantity together have done most to injure our sales abroad. The irregularity of exports is illustrated from the figures given below for 10-year periods.

Exports of butter and imitation butter.

Year.	Butter.	Imitation butter.
	Pounds.	*Pounds.*
1860	7,640,914	
1870	2,019,288	
1880	39,236,658	
1885	21,683,148	761,938
1890	29,748,042	2,535,926
1895	5,598,812	10,100,897
1896	19,373,913	6,063,699
1897	31,345,224	4,864,351
1898	25,690,025	4,328,536
1899	20,245,997	5,549,322

The unfavorable standing of American butter in the London market, our leading export market, led the Department of Agriculture to undertake several experimental shipments in 1897 with a view of correcting some of the erroneous opinions entertained there by the trade. The account of this experiment is so much of an analysis of the methods of distribution in this article of commerce that we make liberal use of it in this part of the report. The importance of the trial is measured partly by the fact that Great Britain imported that year $77,000,000 of foreign-made butter. On the whole, this is the world's best butter market.

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[1] Fifteenth Annual Report Bureau of Animal Industry, Department of Agriculture, 1898, p. 135.

The grade of butter selected is classed as "extra creamery." The creamery system of butter making throughout the East, West, and Northwest was the system represented in these shipments. The particular creameries selected were located in the 11 States of Connecticut, New Hampshire, Vermont, Massachusetts, New York, Ohio, Wisconsin, Iowa, Minnesota, Kansas, and South Dakota. The prevailing creamery methods result in a product far superior in uniformity of characteristic qualities to the product that comes from the farm dairy. Hence high creamery grades are the best for foreign markets. Mr. Alvord reports:[1]

> The objection to the creamery tub at present in British markets is that poor butter from the United States has been so largely exported in that form that this package is closely associated in the minds of export buyers with a low grade of goods. This prejudice is so strong that it is hard to get an English merchant who is seeking good butter even to take time to examine the contents of a package recognized by him as a "States tub."

Owing to the distance and the danger of injury the agents of the Department gave the closest attention to the matter of transportation. Railroad facilities for handling perishable commodities in this country are generally excellent. The cleanliness and temperature of the cars, the freight rates and time schedules for this special service were examined and approved. The creameries of the West are well supplied with refrigerator cars, and butter arrives at the end of a 2,000-mile journey in perfect condition. Carload lots which go through unbroken have great advantages, especially in hot weather, over small lots which are subject to injury from much handling, changes of temperature, and delays. Terminal facilities at the principal markets have been greatly improved, but are yet far from perfect. By efficient cooperation between railroads and merchants it seems possible to materially lessen the time between discharging the refrigerator cars and the storing of the butter in cellars and cold rooms.

The Department trials included 23 shipments of butter intended for export. Of these shipments, 15 arrived on time; 4 arrived on day appointed, but too late for sailing, and 4 were delayed on the road by avoidable circumstances in connection with transfers.

Local traffic still lacks an efficient refrigerator service. Butter arrived at the port of export in better condition and at a smaller cost per pound from points 2,000 miles away than from points 100 to 300 miles distant.

During a great part of the year accommodations for first-class ocean freight are good and sufficient. But it is not safe to ship high-grade butter in summer except in cold storage when there is also an increased demand for cold storage for other perishable products. Up to the present time, however, ships have not found it profitable to be prepared for cold storage, which is demanded only during the summer months. There is of course a constant demand for refrigerated space by the shippers of fresh meat all the year round.

In 1897 one commercial refrigerator was open to the general public on one line of steamers out of New York 3 weeks out of every 4. Other lines occasionally offered refrigerator accommodations for general use. Inquiries at other American ports failed to find such facilities. Earnest efforts on the part of this Department to arrange for experimental exports of dairy products failed because refrigerated space was not obtainable.

While this unfortunate lack of refrigerated space available to all exporters exists in this country, the butter makers and merchants of Canada have export facilities which can hardly be excelled. Seventeen steamers sailing from Montreal during the past season were fitted with refrigerators which could be secured by shippers in general at extremely low rates. Under the contracts between the Canadian government and the steamship lines these extra facilities are offered to shippers of butter at about 1 mill per pound above prevailing rates for first-class freight. During the season of 1897 the rate on butter in refrigerators from Montreal to London averaged about one-half cent per pound. But these rates were for Canadian produce only, and could be obtained for other produce only in case Canadian offerings did not fill the space.

The combined railway and ocean rates from Northwestern States to Great Britain were so much more favorable by way of Montreal that during 1896–97 the quantity of butter going into Canada at Detroit, Mich., and Champlain, N. Y., was three times as great as during 1895–96.

Terminal facilities at the end of the voyage were found to be far from what was needed. One refrigerator on the wharf at Southampton was without division, and hence unfit for the storing of butter, which would have to be stored along with meats and other perishables. Refrigerator cars on the London line are furnished for carload lots only, and shippers must provide their own ice. There was little delay in transferring from terminal station to warehouses in London, and the service altogether was better than in New York. Better cold storage at British ports and more general use of refrigerator cars on British railways are improvements required for this trade.

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[1] Report of Bureau of Animal Industry, Department of Agriculture, 1898, p. 87.

These experiments were conducted with a view of ascertaining the difficulties and obstacles in the development of an export trade in American butter. While conducted as nearly as practicable in commercial lines the main object was not profit, but information. The amount handled was small, of course, in any one shipment, so that the expense, per unit of product, was all the higher than would have been the case for a regular supply. The small shipment, moreover, attracted no attention in the great London market. Nevertheless, even under these disadvantages the financial results were reasonably satisfactory, as the following summary shows:

"The purchases for these exports were made during the 7 months from April to October, inclusive, at prices ranging from 13 cents per pound, paid in Kansas in July, to 25 cents, paid in Connecticut in October. The sales in London ranged from 15¼ cents in May, to 21¾ cents in October. Butter sent in rather more than half of the several shipments was sold at more or less profit, and this was the result with almost half of the different lots of butter. Notwithstanding the unfavorable conditions mentioned, butter from Minnesota and Ohio sold at a net profit of 2¼ cents per pound, from Kansas at 2 cents profit, and from Wisconsin at about 1 cent. The average cost of these lots at the creameries where made, at current market rates, was 14¼ cents, and the average selling price of the same in London was 18¼ cents. (The fractions stated are not exact, but approximately correct.)

"Every lot of butter obtained in New England, as well as one lot from New York, was sold in London at a decided loss. This was due partly to the disproportionate cost of transportation to New York, already noted, but more particularly to the higher prices which the creameries of this region are able to maintain because of the local markets for their product. It was plain enough, in advance, that butter which, during the summer, was in active demand at 20, 22, and 25 cents a pound at the creamery door could not be exported at a profit.

"On the other hand, all the butter bought at creameries in Ohio or States farther west, at the current wholesale rates for "extras," was sold at a net profit in England, with the exception of a few lots at the two ends of the export season, when the market relations were known to be unfavorable to such transactions."[1]

Experiments of a similar nature have since been made by shipments of butter to Asiatic countries, in two successive years, 1898 and 1899. In each attempt the Department of Agriculture has sought to ascertain what the requirements of a successful trade in this product are and what obstacles will have to be overcome to establish and maintain trade relations on an enduring basis.

Particularly in our dairy products there is much justifiable prejudice to overcome in the foreign trade. This part of our trade has been not only neglected in the past, except when we had a surplus which could not be disposed of at home, but what success we have gained abroad has been not infrequently abused to the disgust of the foreign trade. It is a fact little short of shameful that during the fiscal year of 1899-1900, ending June 30, 12 per cent of the butter exported from New York was returned to this country.[2]

It seems to be the inherent tendency of much of our trade success to destroy itself by disregarding the interests of the consumer after a market has been opened. We have repeatedly proved ourselves to be our own worst enemies by gaining a market on the superior merits of our farm products, as in the case of meats, and then losing it by letting the quality decline until consumers rejected it altogether. This is the case with butter, and to a considerable extent with our cheese. As long as our best cheese is sold as Canadian cheese and our bogus cheese is sold as American cheese, the American product as a whole must suffer neglect on the part of both the foreign trade and consumer.

One remedy for this is the adoption of a system of State inspection at the ports of shipment to guarantee the standard and prevent the exportation of such quality of goods as to bring our products into bad repute abroad. This may seem paternalistic, but it is really necessary in justice to honest producers that fraudulent shipments be prevented. We undermine our credit as producers by permitting them. The services of diplomacy have constantly to be invoked to prevent foreign governments from passing more restrictive laws against our trade in farm products, because careless or dishonest exporters have been suffered to endanger legitimate business. The fresh-meat inspection laws in Germany, and the exclusion of our fresh fruit on account of the San Jose scale from most European countries, are instances in which systematic prevention, by some system of State inspection, would have been far better than the drastic method of cure by the exclusion of our products entirely.

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[1] Bureau Animal Industry, Department of Agriculture, 1898, pp. 97-98.
[2] New York Commercial, June 2, 1900.

The most recent experimental exports of dairy products conducted by the Dairy Division of the Department of Agriculture have led to the same conclusion—that some system of governmental inspection is absolutely necessary to protect producers from the effects of fraud in trade. In his report, Mr. Henry E. Alvord, who conducted these experiments, sustains this conclusion by facts which indicate the extent to which the rural interests have suffered by the faults of the trade. The experimental exports, he says, of dairy products made during the last 2 years and now in progress under special provision of law have produced marked results.[1] But these are not satisfactory in all respects and the reputation gained needs to be protected by authority from Congress for some system of export inspection. The new markets opening for our dairy products require a guaranty of the purity and quality of butter and cheese sent from the United States, such as is given by other governments, and especially Canada.

Not long ago this country supplied and practically controlled the cheese market of Great Britain. In some years we sent to England nearly 150,000,000 pounds, or two-thirds of our entire cheese product. But as no system of export inspection existed to guard the established reputation, unscrupulous merchants exported great quantities of inferior, adulterated, and counterfeit cheese, until the reputation of States cheese was destroyed in England, and that market lost to us. Canada, on the other hand, adopted a system of government control, was enabled to guarantee all cheese exported as pure and of standard quality, and thus secured, and still holds, the desirable British cheese trade which this country lost. We have recovered a little, but only a little, of the lost ground. The best cheese now exported from this country goes through Montreal, seeking the same avenues and the good company of Canadian cheese, finding a market virtually as a part of that product.

The same unfortunate result seems likely to follow the efforts to export fine creamery butter to Great Britain unless measures are promptly taken to avoid it. An active demand has arisen for this butter, especially in the northern counties of England, supplied from Manchester, largely through the experimental efforts of this Department. During the summer of 1899 an exceptional scarcity of European butter caused very high prices, and British merchants sent large orders to New York. In the month of August our butter exports were six times as great as for the same month a year ago. This new and profitable demand for fine creamery butter had scarcely begun, however, before large quantities of an inferior article and also of imitation creamery, "process," or renovated butter began to appear among the exports.

This article, which is a more dangerous and damaging counterfeit of fresh creamery butter than straight oleomargarine, was sent to New York by the carload for export. In at least one instance parties had renovated butter put up in the West in the style of package adopted by this Department in its recent export trials to England, and this went abroad labeled, "Finest American creamery butter." The effect of this upon future butter trade with Great Britain will probably be like that which followed the export of so much unidentified filled cheese. Already English merchants, who have been trying to introduce States creamery butter among their customers, have written to this Department complaining of the deception practiced upon them.

If inspection and certification are authorized by Congress, the pure and unadulterated dairy products of the United States that are of a quality entitling them to official indorsement can be given a position in foreign markets which they can not otherwise secure, and which will enable them to compete successfully with like products from any other country.

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[1] This abstract of Mr. Alvord's report is taken from the New York Produce Review and American Creamery, December 20, 1899.

DIRECTOR [illegible] RIES.
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PART SEVENTH.

COLD STORAGE AS A DISTRIBUTIVE FACTOR.

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1. COLD STORAGE AND COMPETITION AMONG PRODUCERS.

One primary difference between the agricultural and the manufacturing producer lies in the fact that the manufacturer makes his goods as fast as he needs them to supply the demands of his customers, while the products of the farm are gotten ready for the market within a few months of the year. The one spreads the whole of his yearly product out over 12 months; the other congests into 3 months almost the whole of the year's product. The manufacturer can maintain prices by at once stopping production; the farmer must go on in the face of a falling market and can restrict his production in no way to produce an immediate effect on prices.

Various remedies have been suggested to overcome this unfavorable relation of the farmer to the market. The subtreasury plan so prominent in Western and Southern political platforms several years ago was one remedy. Its practicability was never tested, and the most serious objections to it were those based on the changeableness of values of some kinds of farm products and the perishable character of others.

Since the advocacy of that scheme for enabling farmers to realize promptly on their crops the financial condition of rural industry has been radically changed throughout the West and to a less extent throughout the South. Meanwhile much progress has been made in the methods of handling the surplus stock of farm produce by the use of storage facilities in towns and cities. Last year the low price of apples, for example, led to the storage of a very large proportion of the Northern crop by dealers. The intention was to hold for a higher price and to avoid breaking down prices in the fall by putting an undue quantity on sale out of the abundant crop. The policy was sound, but the preparation was inadequate. Almost any kind of space was used for storing this fruit. The result was that it did not keep well, and the loss fell upon the producer and the dealer alike all through the year. Expensive storage charges frequently forced the holder to market his stock at an unfavorable stage of the market. On the whole, the attempt on the part of city storage to handle an abundant crop proved a failure so far as the producer's and the distributer's interests were concerned. The consumer suffered in the quality and paid for the loss due to inadequate storage methods.

The only successful method by which the producer can control the annual yield of the farm so as to market it at the rate at which consumers require it throughout the year is to equip the farm with cold-storage facilities. Fruit farms and dairy farms are especially in need of such an equipment as will enable them to await more favorable prices. It is not necessary that each farmer should have his separate storage establishment. Several farmers could jointly own and operate a single establishment.

What effect would such a change in the method of handling the surplus products of the farm have upon the interests involved?

In the first place it would greatly reduce the degree of competition among producers by holding in reserve a considerable proportion of the output in the season of the year when the yield is abundant to be marketed in the season when the supply is relatively scarce.. This applies particularly to butter, eggs, fruit, and orchard products. The reduction of competition among producers would help to raise the level of prices in flush seasons and to lower it in seasons of relative scarcity. A more even course of prices would characterize the market throughout the year, and the interests of the consumer would be served thereby. The distributer's interest is also bound up with an even tenor of prices, rather than with an alternate glut, which always affects the quality unfavorably, and a scarcity, which works injury to the consumer. Without such facilities for storing, the producer must put up with low prices, the consumer must pay high prices in winter, and the distributer run risks that a farm storage system would do much to eliminate.

The practice of Canadian creameries has shown how important a part this system of home storage has contributed to the development of the foreign trade of that country in butter and cheese. Recognizing that butter needs cold storage from the time it is made until it is put into the consumer's hands, the Canadian minister of agriculture has been paying to each creamery owner a bonus of $100 for providing cold-storage facilities according to plans furnished by the department and keeping the same in operation for 3 years. Already 200 creameries have availed themselves of this offer in the Province of Quebec and 100 in other parts of Canada.[1] The same methods are there being pursued for handling cheese, poultry, and fruit, with the effect that these products of Canadian farms are being put down in the London, Liverpool, and Bristol markets in as fine condition as they were when they left the farm.

There can be no doubt that the success of the Canadian farmer in capturing our cheese and butter market in Great Britain is largely due to this superior equipment of the farm with cold storage in connection with the regular refrigerated transportation facilities on railroads and steamships, affording the best of means of preserving the quality of the product in transit from the maker to the consumer's market. Until the American farmer is equally well equipped his competition with Canadian farmers can not be placed on a solid footing. Success in foreign trade in this case depends, in the first place, on the equipment of the farm.

A well-known producer of fruits points out the possibilities of cold storage in handling fruits. "Cold storage," he says, "is going in the future to play a large part in our fruit culture, and by cold storage I mean cold storage, and not the cold storage like some of that we have had in the past. I mean cold storage that will be either directly upon the farm, owned and operated by the farmer himself, or neighborhood cold storage which is cooperative and in which the fruit shall be put within an hour, or half an hour, or quarter hour after it is picked, or just as quick as it possibly can be. Lack of promptness in the care of fruit after it is picked accounts for the loss of a great deal of it. We have picked our fruit, gathered it, and held it for a while, or we have often carried it to market and tried to sell it, and then, when we couldn't get what we wanted for it, we put it in cold storage. Then they said it was not good, and came out in bad shape. With cold storage we shall be able to gather our fruit and hold it until the market conditions enable us to sell it to the best advantage."[2]

A writer on the subject in the American Cultivator gives some practical suggestions on this method of improving prices for fruit farmers. "The fruit farm," he says, "is the proper place for the cold storage of fruit. This is acknowledged now by the best authorities on cold storage. The reason for this is that the fruit must of necessity be injured and wasted in handling before it reaches the cold storage in the cities. In order to keep fruits for a long time in cold storage, they must be raised and packed especially for this.

"Dealers who receive a surplus of fruit in hot weather send part of it into cold storage for a few days to prevent its rotting on their hands, but this is very different from the cold storage of fruits for a long period until all of the other fruit is off the market. Thus grapes, pears, apples, and similar fruits are put away in cold storage until long past middle winter. Then they are brought out and sold for fancy prices.

"The possibilities of cold storage on the farm will be appreciated by another generation, and every large fruit farm will have its cold-storage house. The ordinary ice house is used on some farms where ice can be easily obtained in the winter season. But the farmer situated inland from any body of fresh water is not rendered helpless. The ammonia and dry-air process of freezing and making cold storage is even cheaper than using ice. It costs more at the beginning to start an ammonia cold-storage plant, but after it has once been erected the cost of maintaining it is cheaper than using ice.

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[1] Cold Storage, December, 1899.

[2] J. W. Hale, in Connecticut Board of Agriculture, 1898, p. 205.

"The dry cold air that comes from one of these cold-storage plants is better for the fruits than the damp air that prevails in an ice house. The construction of such a cold-storage house by a number of farmers in one locality would prove a feasible plan, and in the end the cooperative work would pay. The lack of cold-storage facilities has caused thousands of dollars worth of loss on nearly every fruit farm of any size in the country. Not only would such a storage place be of inestimable value in keeping the fruits a few weeks to take advantage of the markets, but it would serve as a place to keep certain fruits for out-of-season markets, when prices always rule high. At present the merchants in the cities reap all this profit."[1]

2. EFFECT OF STORAGE SYSTEM ON PRICES.

Fresh eggs and storage eggs comprise our supply. It is impossible to say what quantity of eggs is in storage at any time, both because the storage supply is constantly changing and because the storage people are loth to inform anyone of the stock they hold. Eggs in storage are like stocks of wheat in farmers' hands—the speculating market never is sure of how much it really is until the price becomes high enough to call it out, as when some one attempts to corner the supply. This feature of the storage business is always a factor in the price of eggs.

The storage of eggs is in fact a sort of a corner in itself. But its real bearing in prices is not that of an attempt at monopoly. Its effect is rather that of all attempts at control of a portion of the available supply, namely, to sustain prices of fresh eggs when they tend downward from oversupply and to depress prices when they rise too rapidly from undersupply. The market now expects storage houses to lay in a stock of May and June eggs regularly, and thereby keep up the level of prices, and when a protracted cold spell cuts off the supply of fresh eggs, then the storage supply is put upon the markets at a scarcity price or something less.

As a rule it is considerably less. In the Cincinnati market it is estimated that by means of the cold-storage demand the summer price of eggs is raised from about 5 to 7 cents per dozen to about 8 to 10 cents; the winter price is reduced from 25 to 30 cents to 15 to 18 cents per dozen.[2] Far from being a monopoly feature in the egg trade, the cold-storage system operates as a balance wheel in regulating prices. In the summer it keeps up prices paid to producers; in the winter it keeps down prices paid by consumers.

Another aspect of cold storage is here to be noted as affecting the distribution of eggs. By no other system could those vast stocks of eggs be maintained which have to be on hand to meet foreign orders that must be filled at short notice to go by steamers within, say, forty-eight or seventy-two hours. Readiness to fill large orders quickly has been a factor in making our reputation as a bridge-building and locomotive-making people. Likewise the readiness to meet large demands for farm products of any kind must be made the test of our distributive system. We are only beginning to learn this, and when we learn it we may be able to get more of the immense trade in eggs as well as of poultry, for instance, with Great Britain.

In a recent Consular Report, Mr. Marshall Halstead, United States consul at Birmingham, gives some interesting figures concerning the importation of poultry and eggs into Great Britain. It is astonishing to learn that England imports something like 100,000,000 dozen eggs, valued at $24,000,000. Almost all come from the Continent, Denmark furnishing the choicest, as all eggs from that country are stamped with the name of the person by whom they were shipped. This furnishes a guarantee of freshness, most desirable matter in a country that imports such vast quantities of eggs.[3]

The following table compares the July prices of butter, eggs, and cheese with the December prices, July being the time such articles go into storage and Decemr ber the time they come out. The gross gain in price varies from 21.9 to 88.8 per cent—from which expenses must be deducted.

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[1] Quoted in Cold Storage, from T. W. Chambers, in American Cultivator.
[2] Special report of Mr. Joseph D. Morten, of Cincinnati Price Current.
[3] Quoted from the Cincinnati Tribune.

July and December wholesale prices of storable farm products.

	Butter, extra creamery, per pound.		Eggs, average best fresh, per dozen.		Cheese, per pound.	
	New York.	St. Louis.	New York.	St. Louis.	New York, separate colored.	St. Louis, full cream.
	Cents.	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*
July, 1899	17½-18½	18-18	15-16½	9-10	8 - 9½	9¼-10¼
December, 1899	26½-28	26-27	21-24	17-17	12¾-13	12½-12½
Per cent rise in price	51.4-51.3	44.4-50	40-45.6	88.8-70	37.4-26.9	35.1-21.9

3. ECONOMIC DEVELOPMENT OF STORAGE POLICIES.

The policy of the cold-storage interests, so far as a definite policy has developed, is twofold. First in importance and the earliest to develop was the plan of storing such products as could not be disposed of satisfactorily on the markets. Storage was thus used as a last resort. The goods were not selected with storage in view, and frequently were entered in a condition far from favorable for good keeping. Coming out in bad condition, they sold poorly. Storage under this policy was a losing business to the producer or shipper and the receiver. The storage establishment profited and the transporters profited temporarily by this use of storage. Shipments in the long run were discouraged, and it had little effect on prices already depressed.

In the second phase of its development cold storage plays a much more direct part in relation to prices. Prices are maintained by withdrawing from the receipts in any large market considerable portions especially selected for storage purposes. Hence storage interests represent a new kind of customer and compete with dealers on the same market.

The presence of this new factor has helped to change the system of disposing of receipts from that of private consignment to public sales. The tendency has been toward the public auction rather than toward sales by commission houses.

The third phase of storage is that in which the storage establishments are not located immediately in the large centers of consumption, such as Chicago, St. Louis, Cincinnati, and the seaboard cities, but in conveniently located railway centers lying within easy reach of a large number of consuming centers. The policy apparent here is (1) to place the stored supplies at some such point as Springfield, Mass., within a few hours' access of both New York, Boston, and many other less important points; (2) to get the advantage of the lowest railway rates between sources of production and centers of distribution, as in the case of storage establishments in New Jersey, located with regard to competitive trunk-line connection; and (3) to bring storage facilities nearer to the productive areas and primary markets, as in the case of the immense establishment at Indianapolis, to which much of the dressed poultry of Cincinnati goes for keeping.

4. SYSTEMS OF FRUIT TRANSPORTATION TO THE EAST.

The fruit growers of California, in cooperation with the transportation agencies to the East, manage to bring their fruit to the interior and Eastern markets in better condition than almost any other section of the country doing a corresponding volume of business.

Three factors have contributed to this end: First, the system of cooperative marketing so largely developed among fruit-growing interests in California; secondly, the concessions of the railway train service in the expeditious delivery of fruit in distant markets within the least time required for fast freight transportation; thirdly, the improvement of ventilating and refrigerating fruit cars in preserving the fruit in the course of transit. The first of these agencies—cooperative marketing—has successfully distributed the output among large and small markets and thus avoided depressing the price of the product. The other two agencies have developed more or less conjointly. It is, however, necessary to describe this system of distribution with some detail, in order to show exactly how the California fruit growers are related to the railroads on the one hand and to the two refrigerating lines on the other.

At the present time two or three refrigerating lines do most of the carrying on their own cars. Shipments to the Eastern markets are loaded mainly on the cars of the Fruit Growers' Express and the Continental Fruit Express. So completely has this centralization of fruit shipping been advanced that out of 4,700 cars of fruit shipped by way of the Southern Pacific Company in 1898, all but about 100 were cars belonging to these two companies.[1] The Southern Pacific Company engages from these two fruit express companies all the refrigerating cars needed for its traffic.

The fruit growers of California are therefore apparently dependent upon two lines of express cars, among whom competition has practically ceased. The railroad company engages its equipment from these fruit express companies which seem to have furnished all the facilities which the fruit-growing patrons of the railroad require.

The business of transporting fruit in through cars is a twofold enterprise. It is one part of the work to put fruit down at the consuming centers in the least possible time. It is quite another part of the business to see that the fruit arrives in the best state of preservation. Refrigeration is a technical and difficult phase of distribution apart from the work of transportation. It involves facilities for icing and care of the refrigeration on the way to the destination through diversions in transit until a suitable market is found. The present refrigerator system of transportation has succeeded an older method of handling the fruit traffic by ventilated fruit cars. Shippers to Eastern markets, however, insisted on refrigerator service as the only successful method of handling the fruit. In 1888 there appears to have been a general call for refrigerator car service operated by a line that would undertake to handle the fruit through from the points of shipment to destination under ice. Among a considerable variety of interests promoting individual refrigerating lines it became necessary to reduce the system and methods of handling in transit to a degree of uniformity consistent with the high efficiency necessary to handle successfully such perishable traffic. One refrigerator company after another dropped out until the service was occupied by no more than three lines in the summer of 1897. Meanwhile the charges for refrigeration have been reduced from $120 to $60 per car.

5. REFRIGERATOR METHODS IN MARKETING VARIOUS PRODUCTS.

Refrigerating cars have greatly aided in developing three or four great branches of marketing farm products. These are fruits and vegetables from the South for Northern markets, from such States as the Carolinas; they include, also, the marketing of dairy products, such as milk in cities, and butter and cheese at distant places from the locality of production of such, as the butter of Canada and New Zealand in London.[2]

In New Zealand the whole of their dairy produce trade depends on refrigeration. There are cold-storage establishments everywhere that they can be of service. All the large ports have them, and in the butter factories the work could not go on without refrigeration. The manufacturers apply it continually, and in this rests the secret of this season's success—they have learned that butter must be made in a uniformly cool temperature. The factories are nearly all cooled artificially to one mean temperature and kept at that temperature, and the result is that the butter sent to London has held its price throughout the season, owing to its uniform quality. The butter is carefully made under the conditions and methods which science and experience teach are the best. It is forwarded at once to the central stores, where it is tested and graded by government inspectors, and then it is frozen and kept frozen until the time comes to ship it for the London market. This operation is carried out with the least possible change of temperature, so that one may say that the butter, having once been tested and graded, is frozen and remains in that condition until it is offered for sale in the market here, where it generally secures a good, if not the best price.

6. STORAGE ECONOMIES IN THE EGG TRADE.

Our market for eggs at any given time is supplied from three sources. Foremost of all is the current shipments from the Southern and Western States, which with the local supplies, go to make up the bulk of what the consuming centers of population require for their daily needs. Second in importance comes the storage supply. Every spring and during most of the summer months, when the favorable weather for laying puts more eggs upon the market than are consumed, and the price is consequently low, the cold-storage companies are in the large markets to fill their refrigerator space with low-priced eggs to hold for the fall and winter rise in price. The art of refrigerating has been reduced to the exactness of a science, and the risk of loss by injury is almost completely eliminated. Of course a high quality of eggs is selected for storage. The breakage in handling is considerable, but even this unavoidable feature of loss is overcome. Storage houses have learned economics in the handling of eggs. The large storage concerns propose to have as little loss as possible and all the eggs in the case, whether fresh, cracked, dirty, or even rotten, are utilized. All of the small, dirty, and cracked eggs that are fresh and of good quality are canned. They are put up the same as canned meats. The yolks and whites of the eggs go into separate cans, and this product is shipped all over the country and is a great convenience in hot climates. When a baker has use for the whites of eggs, he can buy just what he needs put up in these cans, which saves him the loss resulting from buying eggs as they are ordinarily sold. The quality of this canned product is fine. Then the rotten and cloudy eggs are put up in cans and sold to tanners and used in putting the gloss on fine leather. The "rots" serve the purpose of the tanners and can be bought cheaper. The shells are used in making fertilizers, etc., so that the loss is indeed small. When it is remembered that the small things count up fast in making losses or profits, the value of the economy here practiced becomes apparent.[1]

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[1] Report of California State Fruit Growers' Convention, 1899, p. 21.

[2] From Cold Storage.

The following account of the effect of storing practices on the market for eggs is from the Cleveland Plain Dealer:

> One of the most peculiar situations in regard to the egg supply ever known exists in the United States to-day. The situation is the result of storing eggs in an attempt to control the market. There are liable to be two results. One is that the people of the country will have cold-storage eggs foisted upon them as the newly laid product. The other is that the people who attempt to corner the market will suffer heavy losses.
>
> The beginning of the "cornering" effort dates back to last summer. At that time, it is said, the Chicago packers evolved the scheme of buying up all the eggs that could possibly be gathered together and storing them until the supply became scarce. As is usual in schemes, it was anticipated that the scarcity would send the price sky high. Then the stored eggs were to be unloaded on the market and a fortune was to be made for the packers. It is figured that 7,000,000 cases, each case containing 30 dozen eggs, were stored away. To the industrious hen, whose capacity is 1 egg a day, this is an exceedingly large amount.
>
> The scheme to control the market fell through. There was no call for the stored eggs, and the packers began to lie awake of nights thinking. At present the hens are beginning to lay fresh eggs. These are coming into the market, and no one wants stored eggs.
>
> A little figuring will show how enormous the loss will be. There are 7,000,000 cases of eggs, or 210,000,000 dozen, stored throughout the country. These were bought up at 15 cents a dozen. The present price of eggs per dozen outside of Cleveland is on an average 4 cents less a dozen than the price at which the stored eggs were bought. This will mean a loss of about $8,400,000 to the packers. It is conjectured that there are 6,000 cases of the stored eggs in this city. The loss here will also be very large.
>
> It is reported that the packers in this vicinity have a way out of the dilemma. It is said that next summer when eggs are shipped here from outlying towns, the stored eggs will be mixed with fresh ones, and that in that way the old product will be sold to the unsuspecting public.

7. COMMERCIAL IMPORTANCE OF COLD STORAGE FOR ORCHARD PRODUCTS.

Cold storage is one of the agencies by which producers can control their crops and concentrate them to await large demands and better prices. Especially in the export trade as well as in domestic distribution, the highest economy is attained by being ready to handle large lots. The orchardists who have put themselves in a position to fill large orders from abroad or at home, make all the profit that goes to the intermediary parties who collect these products from the individual grower or the country buyer. The difference between the individual grower's price selling alone in Virginia, for example, and the price paid the producer in New England, where producers have learned to cooperate in control of their apple crop, may easily amount to double the price the Virginia producer receives.

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[1] The Milk Reporter, April, 1900.

If 50 or 100 farmers in a local district would cooperate and build a cold storage near a railroad track for storing their apples, where little or no loss from the apples rotting will be had, and if prices were low they could be held longer; while a farmer alone, with a poor cellar, perhaps, for keeping apples, often loses largely if he attempts to keep a few hundred barrels in his house or barn cellar. The cost for a cold-storage plant pro rata would be comparatively light among 50 or more farmers. Under the cooperation plan, an interested agent could be sent to Europe in the fall, if thought best by the farmers, to take charge of all shipments, thereby increasing their profits.[1]

8. COLD STORAGE RATES IN CITIES.

Cold storage rates in Cleveland.—There are but two cold storage companies in Cleveland that are open to the public—the Cleveland Cold Storage Company, with a capacity of 50,000 cubic feet, and the Sheriff Street Storage Company, with 600,000 cubic feet. Almost every firm dealing in perishable goods has some cold storage of its own, but for public use 650,000 cubic feet is Cleveland's limit.

The rates for cold storage are as follows:

Cold storage regular rates.

Temperature. °	Goods.	Time.	Rate.
32	Apples	Per barrel per month	$0.12½
35	Ale and beer	do	.30
35	do	Per ½ barrel per month	.15
35	do	Per ¼ barrel per month	.10
45	Beer, bottled	Per case per month	.10
45	do	Per cask per month	.20
40	Berries	Per package per month	.10
16–35	Butter and butterine	Per pound per month	.00¼
16–35	do	Small lot, minimum charge	.50
40	Buckwheat flour	Per barrel, per month	.12½
32	Calves	Each per day	.10
20	do	Per pound per month	.00½
35	Canned goods	do	.00¼
35	Cured meats	Per cask per month	.25
35	Cider	do	.25
35	Cheese	Per box per month, first month thereafter.	.06 .04
35	Cigars	Per pound per month	.00¼
35	Celery	Per case per month	.10
33	Cranberries	do	.10
33	do	Per cask per month	.20
33	Chestnuts	Per pound per month	.00⅛
35	Dried fruit	do	.00⅛
35	Dried corn	Per barrel per month	.10
33	Eggs	Per case per month, first month thereafter.	.15 .10
35	Furs, undressed	Per pound per month, hydraulic pressed	.00¼
35	Furs, dressed	Per pound per month	.03
32	Grapes	do	.00¼
36	Ginger ale	Per cask per month	.25
34	Hops	Per bale per month	.25
40	Lard	Per tierce per month	.25
40	Lard oil	Per cask per month	.25
36	Lemons	Per box per month	.10
40	Maple sugar	Per pound per month	.00¼
40	Maple sirup	Per gallon per month	.00½
35	Nuts	Per pound per month	.00¼
35	Oleomargarine	do	.00¼
36	Onions	Per barrel per month	.10
36	do	Per box per month	.10
35	Oil	Per cask per month	.25
35	do	Per hogshead per month	1.00
25	Oysters in tub	Per gallon per month	.05
33	Oysters in shell	Per barrel per month	.50
35	Pears	Per case per month	.10
35	Peaches	Per package per month	.10
40	Pork	Per tierce per month	.25
35	Sauerkraut	Per cask per month	.25
35	Sirup	Per gallon per month	.00½
35	Vegetables	Per barrel per month	.25
35	do	Per case per month	.10
35	Walnuts	Per pound per month	.00⅛
40	Wine in wood	Per cask per month	.25
40	Wine in bottle	Per case per month	.10

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[1] Quoted from Orcharding: its Possibilities and Profits, by Edwin Hoyt, Virginia State board of agriculture, 1899, p. 25.

Cold storage regular rates—Continued.

SEASON RATES.

Temperature.	Goods.	Quantity.	Rate.	Season ends—
°				
32	Apples	Per barrel	$0.40	May 1
16–35	Butter	Per pound, lots of 5,000 pounds	.00¾	Jan. 1
16–35	do	Per pound, less than 5,000 pounds	.01	Jan. 1
35	Butterine	Per pound	.01	Jan. 1
35	Cheese	Per box	.25	Jan. 1
35	Dried fruit	Per pound	.00⅜	Nov. 1
33	Eggs	Per case	.10	Jan. 1
35	Furs, undressed	Per pound, hydraulic pressed	.01	Nov. 1
35	Furs, dressed	Per pound	.10	Nov. 1
36	Grapes	do	.02	Apr. 1
36	Lemons	Per box	.50	Nov. 1
40	Lard	Per tierce	1.00	Nov. 1
35	Nuts (all kinds)	Per pound	.00⅜	Nov. 1
36	Oranges	Per box	.50	Nov. 1
36	Onions	Per barrel	.60	May 1
35	Pears	Per case	.50	May 1
35	Peaches	Per pound	.02	Jan. 1
35	Sauerkraut	Per cask	.75	Nov. 1
35	Sweet corn	do	.50	Nov. 1

FREEZING RATES.

Goods.	Quantity.	Time.	Rate.
Fresh meat	Per pound net weight	Per month	$0.00⅙
Game in season	Per pound gross weight	do	.00⅛
Frozen fish	do	do	.00⅙
Green fish	do	First month	.00⅙
Do	do	Each succeeding month	.00¼
Poultry	do	One month	.00⅙
Do	do	Each succeeding month	.00¼
Do	Minimum charge	Per case	.25
Eggs, canned	Per pound net weight	Per month	.00⅕
Do	do	Season eight months	.01⅜

All other goods for freezing, ⅙ cent per pound per month.
Special rates for quarters of beef and meat in large quantities.

The influence of storage stocks upon prices has been in the direction of uniformity. There are no longer extreme fluctuations in the market, because goods can be bought in first-class condition out of season as well as in season. The average price now is higher than before, however, for the cold storage men come in for their share of profit.

Percentage of depreciation in handling products in cold storage.

Eggs, 1 dozen in 30.

Potatoes, about 5 per cent at most.

Apples, can not estimate; depends on primary selection, method of packing, and the season. Sometimes apples with very sound external appearance rot rapidly; 5 to 10 per cent not considered too much.

Onions, very slight loss.

Cabbage, slight.

Watermelons, if kept any length of time, become a total loss so far as edibility is concerned; they lose flavor.

Poultry, kept in a frozen state does not depreciate at all, but rather appreciates if anything.

Strawberries, usually stored for such short periods of time that no estimate could be given.

Oranges, 1 dozen in 16 a fair average.

Butter and cheese, very slight, if any.

COLD-STORAGE RATES IN CINCINNATI.

Schedule of storage charges on farm products.

[From Cincinnati Chamber of Commerce.]

	First month.	Second month.
Apples:		
Green, per barrel	$0.05	$0.04
Dried, per barrel	.05	.04
Dried, per sack	.03	.02½
Evaporated, per case	.02	.01½
1 gallon, per case	.02½	.02
½ gallon, per case	.02¼	.01¾
Broom corn, per bale	.15	.10
Butter:		
Per barrel	.15	.15
In firkins or tubs, per 100 lbs., per season	.40	....
Cheese, per box	.03	.02
Cider, per barrel	.10	.08
Cranberries, per barrel	.10	.08
Currants:		
Per cask	.25	.20
Per barrel	.10	.08
Dried fruit:		
Per barrel	.05	.04
Per sack	.03	.02½
Eggs, case, per season	.35	....
Grain:		
In elevator, regular elevator charges.		
In sacks, per sack	.03	.03
Hams, per tierce	.10	.08
Hay:		
Per ton	1.00	.75
Hard pressed, per bale	.15	.10
Loose pressed, per bale	.15	.12
Hides:		
Dry, carload lots, each	.02	.01½
Wet, carload lots, each	.03	.02
Carload lots, per bale	.50	.40
Hops:		
Domestic, per bale	.20	.15
German, per bale	.25	.20
Kraut:		
Per cask	.25	.20
Per barrel	.15	.10
Per ½ barrel	.12	.10
Lemons, per box	.10	.08

	First month.	Second month.
Lime, per barrel	$0.06	$0.06
Nuts:		
Per barrel	.06	.04
Per sack	.04	.03
Onions:		
Per barrel	.05	.04
Per sack	.05	.04
Oranges:		
Per box	.10	.08
Per barrel	.10	.08
Peaches, dried:		
Per barrel	.05	.04
Per sack	.04	.03
Peanuts, per bag	.05	.04
Pease:		
Per barrel	.05	.04
Per sack	.05	.04
Pickles:		
Per barrel	.10	.09
Per ½ barrel	.08	.06
Gallon cases	.03	.03
½ gallon cases	.02	.02
¼ gallon cases	.02	.02
Pints	.02	.02
Potatoes:		
Per barrel	.05	.04
Per sack	.04	.03
Prunes:		
Per cask	.40	.35
Per sack	.05	.04
Raisins, per box	.02	.02
Rice:		
Per barrel	.08	.06
Per sack	.08	.06
Seed:		
Clover, per bag	.03	.03
Timothy, per bag	.03	.03
Flax, per bag	.02	.02
Red top, per bag	.04	.04
Millet, per bag	.04	.03
Hungarian, per bag	.04	.03
Tobacco, leaf, per hogshead	.50	.40
Wool, per sack	.12	.10

Richmond (Va.) cold-storage rates.

	Cents.
For one week or less:	
Cut meats, per pound	½
Salt meats, per pound	¼
Hares, each	½
Chickens, ducks, and guineas, each	1
Vegetables, per tray	10
Vegetables, per barrel	15
Tomatoes and berries, per crate	10
Peaches, per crate	10
Pears, per crate	10
Watermelons, each	3
Cantaloupes, per barrel	25
Grapes, per basket	2
Cream, per gallon	3
Milk, per gallon	2
Monthly prices:	
Beef, per quarter	25
Calves	20
Cut meats, per pound	¾
Hogs	20
Salt meats, per pound	¾
Sheep	15
Turkeys and geese, each, for 10 or less	5

Monthly prices—Continued.	Cents.
Turkeys and geese, over 10, per pound	¼
Eggs, per crate	15
Butter, per pound	¼
Lard, per pound	⅛
Dried fruits, per pound	¼
Nuts, per pound	¼
Preserves and jellies, per pound	¼
Potatoes, per barrel	15
Apples:	
Under 50 barrels	25
Over 50 barrels	20
Over 100 barrels	15

PART EIGHTH.

THE DISTRIBUTION OF THE TOBACCO CROP.

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1. PRODUCTIVE AREA OF TOBACCO.

Seventeen States have regularly during the last 14 years produced almost all the tobacco crop of the United States. All other States have yielded from 2,000,000 to 5,000,000 pounds additional out of a total yield of not less than 400,000,000 pounds.

Of these 17 States, 2 lie in the Connecticut Valley and produce, mainly for cigar wrappers, a product varying from 12,000,000 to 16,000,000 pounds. Seven States—Connecticut, Massachusetts, Maryland, New York, North Carolina, Pennsylvania, and Virginia—lie on the Atlantic slope. Within the borders of these States are found several of the greatest manufacturing centers into which the cured crop is gathered for marketing. The other tobacco States lie west of the Alleghenies and east of the Mississippi River, with one exception, and include the States of West Virginia, Kentucky, Tennessee, Ohio, Indiana, Illinois, Wisconsin, and Missouri; Missouri being the only tobacco State of the first rank lying beyond the Mississippi.

As a rule the large manufacturing centers which work up the crop of the interior region stand on the rivers which drain this territory.

The total production of tobacco has not varied much from 1882 down to the present time. Three tendencies may be noticed among the different States as to the volume of production. Within this range of time, from 1882 to 1899, inclusive, Arkansas, Connecticut, Indiana, Massachusetts, Tennessee, and West Virginia show a more or less constant tendency in the volume of production. In Arkansas and Tennessee this constant tendency is characterized by increase in acreage, showing that the extensive methods of cultivation still prevail there. In Connecticut and Massachusetts a constant production is characterized by a shrinkage in acreage. North Carolina alone shows any extraordinary increase in total product. Practically all other States tend to contract and expand their product according to the elasticity of demand. There seems to be no such tendency in the volume of production as corresponds to the increasing consumption of tobacco in different parts of the world.

Each of these States has produced a million or more pounds of tobacco per year. During the past 16 years the areas of production of tobacco have not shifted, as has been the case with certain other farm crops.

Even in the Connecticut Valley it is still a subject of controversy among producers as to whether tobacco growing does not exhaust the resources of the farm to such an extent as to impair the productive efficiency of the farm as a whole.[1]

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[1] Report of the Connecticut Board of Agriculture, 1898, p. 113-114.

In North Carolina and throughout portions of the Piedmont section of the Southern States tobacco culture has advanced as a substitute for cotton, which farmers abandoned on account of the unprofitably low prices for that product in recent years.

On the whole, therefore, it may be said that tobacco production is still one of the important features of the mixed farming in the eastern half of the United States. No other crop holds exactly the same relation to the market or to the consuming industries as a raw material. More than any other industry, tobacco manufacturing is a household industry in some parts of the country, and in general it is carried on in factories organized on the larger scale.

2. PRODUCTION, PACKING, AND PRICES.

In point of commercial value our tobacco crop ranks seventh among United States crops. It stands between potatoes and barley, and therefore exceeds in value three of our cereal crops, namely, barley, rye, and buckwheat. It is outranked commercially by corn, hay, wheat, cotton, oats, and potatoes, on the basis of the figures of value given by the Department of Agriculture for the year 1898.

For the past decade this crop has shown a tendency to decrease its output, owing largely to the low prices that prevailed during the early years of the period. This tendency, as illustrated below, is of somewhat older origin. The average farm price of tobacco in 1887 was 10.3 cents per pound. Taking that as a basis, we have the following figures for a series of years since, in cents per pound:

Average farm prices of tobacco.

	Cents per lb.
1889	7.1
1890	7.7
1891	8.4
1892	8.1
1893	8.1
1894	6.8
1895	6.9
1896	6

Meanwhile the total production was steadily declining until 1897, when it was but 403,000,000 pounds, compared with 565,000,000 in 1888. The acreage had decreased from less than 750,000 to less than 600,000—a shrinkage of 20 per cent.

The productive areas of American tobacco are widely scattered, and therefore its commercial centers are numerous. The 18 States that figure in the statistical statements of production are, with one exception—Missouri—east of the Mississippi River. Nine are north of the Potomac and the Ohio and the other 8 in the South. The 2 States of Kentucky and North Carolina produce about half of the entire tobacco crop; and these, with Virginia and Tennessee, produce three-quarters of the crop. This group of 4 States—Virginia, North Carolina, Tennessee, and Kentucky—comprised 80 per cent of the total productive area in 1896.

In addition to these areas there are several subsidiary districts of more than ordinary importance. Among these are the Connecticut Valley, with Hatfield, Springfield, and Hartford as commercial centers, and the Susquehanna, the Schuylkill, and the Delaware valleys in eastern Pennsylvania, with Lancaster and Reading as leading markets. Ohio, Illinois, Wisconsin, and Missouri are secondary States in amount of yield, but are depended upon to supply a variety peculiar to western soils. Florida has more recently begun to cultivate and manufacture Cuban varieties of tobacco.

The relation of the producer to the market varies somewhat with the variety of product his locality yields; but in general the tobacco grower in the leading tobacco sections has a truly competitive market in which to dispose of his crop. Probably no farm product is so directly sought after by dealers or manufacturers' agents as is the tobacco grown in Pennsylvania, in New England, and in the West; and no other product of the farm has the advantages of a public and well organized market to the extent that is accorded tobacco in the South. Unlike wheat, the tobacco crop nowhere passes into market as soon as it can be gotten ready. Indeed, in no other crop do growers get the advantage of holding for the future values quite so generally as in the case of leaf tobacco.

The tobacco crop in the South is one of the most open markets to be found. In every market a system of warehouses exists, with extensive floor space upon which the wagon load brought in from the farm is deposited in assorted piles. The customary hour for sale is known. Buyers, representing local packers, manufacturers, and exporters, are to be found there, and agents representing leading tobacco centers are located at the largest markets. There is, therefore, active competition among the various buyers. No other product—not even cotton—has so advantageous a market as tobacco, because of the fact that at all leading markets the producer's crop is put on sale at the point where consumers in person compete for his raw material.

In the Northern States the large warehouse for sale purposes does not figure extensively. The rule is rather to purchase from the producer by sample from the wagon, whence it is stored. From the warehouse floor, where the grower sells his tobacco, it passes to the packing house. By the work done there the mass of leaf is prepared for the multiform demands of consumption. In fact, the different kinds of tobacco are dealt in so extensively by manufacturers that they have packing houses in each of the leading districts where the tobacco, which they consume in manfacturing, is produced. One of the largest leaf-buying firms in the United States has 8 packing houses located at Lancaster, Pa.; Janesville and Cambridge, Wis.; Hatfield, Mass.; Brookville, Ohio; Brattleboro, Vt.; East Hartford and New Milford, Conn., with a combined storage capacity of 28,000 cases. This feature of the tobacco trade brings the manufacturer and the producer together at or near to the locality of production, and eliminates speculative dealers whose profit would of course net a lower price to the producer.

Packing for export becomes a matter of special importance in the tobacco trade. Many exporters take the entire yield of a particular locality. The light tobaccos produced in Maryland are air cured, while a similar type grown in eastern Ohio is largely cured by wood fires. These tobaccos are used exclusively for pipe-smoking and cigarettes, the following grades being made by packers: Fine yellow, medium bright, good ordinary "colory," fine red, fine seconds, and lugs. Nearly all of these goods are exported, the best markets being found in France, Germany, Holland, Austria, and Belgium. Almost the entire yield from Maryland and eastern Ohio is sold in Baltimore, where five large warehouses have been established for the inspection of these goods by State officers. As soon as these tobaccos are entered in the warehouses a sworn and bonded inspector draws four samples from each hogshead, taken from different places and at equal distances apart, beginning near the bottom of the hogshead. These four samples or hands are tied together, and are sealed and labeled with the name of the owner, the number of the hogshead, its net and gross weight, and the name of the inspector. The agents of foreign countries buy exclusively from these samples. When the goods are shipped the samples are also forwarded, so that the goods on reaching their destination can be compared with the samples from which they were bought. If there should be more than 10 per cent of tobacco in the hogshead poorer than the sample the inspector, who is under bond, becomes liable for such difference.

3. DISPOSITION OF THE TOBACCO CROP IN MANUFACTURING.

The following table will show the annual production of leaf tobacco in the United States from January 1, 1895, to January 1, 1897, inclusive.[1] The production for 1898 can not be ascertained until returns for 1899 are complete. In this table the production for each year mentioned is compiled from the returns for the next succeeding year:

	1895.	1896.	1897.
	Pounds.	*Pounds.*	*Pounds.*
Leaf tobacco, including scraps and stems used in the manufacture of chewing and smoking tobacco and snuff	234,561,904	265,871,158	247,358,414
Leaf tobacco, used in the manufacture of cigars and cigarettes	95,053,056	96,213,473	102,519,323
Domestic leaf exported	300,047,687	281,174,422	269,966,833
Imported tobacco exported	2,767,454	1,779,103	2,323,516
Total	632,430,101	644,938,156	622,168,086
Deduct imports for each calendar year	20,258,704	12,848,743	11,307,830
Total annual production	612,171,397	632,089,413	610,860,256

The demand for domestic consumption is apparently increasing, while the export and the import movements are decreasing, showing that the country is growing more self-sufficing.

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[1] Internal Revenue, Annual Report, 1898, p. 40.

Where the tobacco crop is consumed.—Tobacco is manufactured in 51 States and Territories. In New York State there are 503 factories, and 10 States have over 100 factories each. The Commissioner of Internal Revenue reports 34,042 tobacco and cigar manufactories in 1898.

Tobacco and cigar manufactories in the United States.

Kinds.	1897.	1898.
Registered tobacco manufacturers	3,312	3,186
Registered cigar manufactories	31,435	30,856
Total	34,747	34,042

The following table shows how widely the first class of factories, which is the main one in point of consumption, is distributed:

Registered tobacco manufacturers in the United States.

States and Territories.	1897.	1898.	States and Territories.	1897.	1898.
Alabama	1	2	Nebraska	41	40
Arkansas	9	7	New Hampshire	2	2
Arizona	2	0	New Jersey	71	64
California	21	19	New Mexico	1	3
Colorado	17	23	New York	176	503
Connecticut	61	54	North Carolina	219	201
Delaware	6	2	North Dakota	1	0
District of Columbia	3	1	Ohio	241	237
Florida	18	14	Oklahoma	2	0
Georgia	11	11	Oregon	20	24
Idaho	3	0	Pennsylvania	311	295
Illinois	415	406	South Carolina	12	8
Indiana	107	98	South Dakota	8	7
Indian Territory	2	0	Tennessee	69	63
Iowa	117	111	Texas	27	20
Kansas	53	57	Utah	1	0
Kentucky	130	139	Vermont	7	6
Louisiana	65	68	Virginia	150	126
Maryland	32	40	Washington	11	0
Massachusetts	30	31	West Virginia	38	29
Michigan	172	149	Wisconsin	97	96
Minnesota	103	105	Wyoming	2	0
Missouri	88	92			
Montana	18	23	Total	3,312	3,186

4. EXPENSES OF DISTRIBUTION.

Tobacco is a farm product that passes wholly into commerce from the farm; practically no part of it is now consumed on the farm. It is furthermore peculiar in that there are so many varieties and grades that it is difficult to connect farm prices with the commercial grades to which they belong.

In a rough way, the producer assorts his tobacco for marketing either in his own barn, as in the North, or on the warehouse floor, as in the South. But before it gets to the manufacturer it may have been reassorted in packing houses into a much greater variety of classes. It is impossible, therefore, to follow the same lot of leaf tobacco from producer to consumer with any degree of accuracy. The best that could be done to ascertain the expenses of distribution was to get persons throughly familiar with the market to make estimates of the expenses necessarily incurred for given units of product of a few leading grades at a given price per unit. By taking several prices, each of which is made the basis of a calculation, we arrive at the resulting cost of distribution per 100 pounds of several different grades of tobacco sold at a given rate per pound. The rate per pound being the prevailing one for a leading market, we have a fairly accurate figure on which to determine what proportion of the cost to the manufacturer goes to the producer and distributer.

Three such estimates were obtained for three primary markets—Richmond, Va., Louisville, Ky., and Durham, N. C.

5. EXPENSES OF MARKETING AT PRIMARY MARKETS.

The statements given below show the cost to producer for selling the three most prominent grades of bright tobacco at Richmond when consigned by the grower in the yellow leaf district from North Carolina. The charges are exactly as if the unit of tobacco used as an example had been shipped and sold in Richmond.

The freight is that of an average point in North Carolina, the freight charges to Richmond being the same for nearly every depot in the State. For farmers shipping from Virginia points to Richmond, the only difference would be a slight reduction of about 5 cents in freight, on the same kind of tobacco. Other charges are substantially the same, being affected only slightly by distance.

(1) Expenses at Richmond, Va.—(a) The cost of selling 1 hogshead of tobacco shipped by planter in North Carolina to Richmond, Va.[1]

[Smoker grade No. 1, costing 6 cents per pound. Gross weight, 1,020 pounds; tare, 140 pounds; net 880 pounds.]

(1) Gross cost at factory in Richmond, 880 pounds, at 6 cents		$52.80
(2) Distributing charges:		
Freight	$2.55	
Drayage to warehouse	.25	
Warehouse charges	.88	
Auction fees	.75	
Commission, 2½ per cent	1.32	
Drayage to factory	.35	
		6.10
(3) Net paid producer		46.70

Same hogshead, if inspected by bonded inspector and sold by sample.

[Smoker grade No. 1. Gross, 1,020 pounds; tare, 140 pounds; net, 880 pounds; average price, 6 cents.]

(1) Gross cost at factory in Richmond		$52.80
(2) Distributing charges:		
Freight	$2.55	
Drayage to warehouse	.25	
Warehouse charges (inspector)	1.00	
Commission, 3 per cent	1.57	
Insurance, ½ per cent	.26	
Outage	1.50	
Drayage to factory	.25	
Auction fees	.15	
		7.53
(3) Net paid producer		45.27

Percentages of cost of same when sold without bonded inspection.

	Amount.	Per cent.
(1) Gross cost to consumer	$52.80	100
(2) Expenses of distribution	6.10	11.6
(3) Net to producer	46.70	88.4

Same when sold with bonded inspection.

	Amount.	Per cent.
(1) Gross cost to consumer	$52.80	100
(2) Expenses of distribution	7.53	14.3
(3) Net to producer	45.27	85.7

[1] Data furnished by Mr. M. T. Smith, special agent, Richmond, Va.

(b) Cost of selling 1 hogshead of tobacco shipped by planter from North Carolina.

[Costing 12 cents per pound. Sold as loose tobacco. Cutter or cigarette grade No. 2. Gross, 1,020 pounds; tare, 140 pounds; net, 880 pounds; average price, 12 cents.]

(1) Gross cost at factory in Richmond, 880 pounds, at 12 cents		$105.60
(2) Distributing charges:		
Freight	$2.55	
Drayage to warehouse	.25	
Warehouse charges	.88	
Auction fees	.75	
Commission, 2½ per cent	2.64	
Drayage to factory	.35	
		7.42
(3) Net to producer		98.18

Same hogshead, if inspected by bonded inspector and sold by sample.

[Cutter or cigarette grade No. 2. Gross, 1,020 pounds; tare, 140 pounds; net, 880 pounds; average price 12 cents.]

(1) Gross cost at factory in Richmond, 880 pounds, at 12 cents		$105.60
(2) Distribution charges:		
Freight	$2.55	
Drayage to warehouse	.25	
Warehouse inspection	1.00	
Auction fees	.15	
Commission, 3 per cent	3.16	
Insurance, ½ per cent	.53	
Outage	1.50	
Drayage to factory	.25	
		9.39
(3) Net to producer		96.21

Percentages when sold without bonded inspection.

	Amount.	Per cent.
(1) Gross cost to consumer	$105.60	100
(2) Expenses of distribution	7.42	7
(3) Net to producer	98.18	93

Same when sold under bonded inspection.

Items.	Amount.	Per cent.
(1) Gross cost to consumer is	$105.60	100
(2) Expenses of distribution are	9.39	8.9
(3) Net received by producer is	96.21	91.1

(c) Cost of selling 1 hogshead of tobacco, shipped by planter from North Carolina, costing 20 cents per pound; sold as loose tobacco.

[Wrapper grade for plug tobacco. Gross, 1,020 pounds; tare, 140 pounds; net, 880 pounds. Average price, 20 cents.]

(1) Gross cost at factory in Richmond, 880 pounds, at 20 cents per pound		$176.00
(2) Distributing charges:		
Freight	$2.55	
Drayage to warehouse	.25	
Warehouse charges	.88	
Auction fees	.75	
Commission, 2½ per cent	4.40	
Drayage to factory	.35	
		9.18
)3) Net received by producer		166.82

Same hogshead if inspected by bonded inspector and sold by sample.

[Wrapper grade for plug tobacco. Gross, 1,020 pounds; tare, 140 pounds; net, 880 pounds. Average price, 20 cents.]

(1) Gross cost at factory in Richmond, 880 pounds, at 20 cents per pound		$176.00
(2) Distributing charges:		
Freight charges	$2.25	
Drayage to warehouse	.25	
Auction fees	.20	
Commission, 3 per cent	5.28	
Warehouse charges, inspection	1.00	
Insurance, one-half per cent	.88	
Outage	1.50	
Drayage to factory	.25	
		11.61
(3) Net received by producer		164.39

Percentages when sold without bonded inspection.

Items.	Amount.	Per cent.
(1) Gross cost to consumer is	$176.00	100
(2) Expenses of distribution are	9.18	5.2
(3) Net received by producer is	166.82	94.8

When sold under bonded inspection.

Items.	Amount.	Per cent.
(1) Gross cost to consumer is	$176.00	100
(2) Expenses of distribution are	11.61	6.4
(3) Net received by producer	164.39	93.6

(2) *Expenses of marketing leaf tobacco at Louisville* from Kentucky shipping points are calculated for a group of shipping and producing points from which an average freight can be given. No account is taken, in the expenses of distribution here figured, of items of expenses incurred by the farmer prior to delivery of tobacco on board cars at his local station. These earlier items of expense include stripping and prizing into hogsheads, as well as hauling to station. Curing is, of course, not to be included, because uncured tobacco is not in merchantable form. The work of stripping and prizing is usually done on the farm in Kentucky, but elsewhere is frequently done in the packing houses located in the vicinity of production. Stripping and prizing cost on the average 85 cents per hundred pounds. The haul to the railway depot is omitted from the calculation made here, but it can hardly be less than 3 cents per 100 pounds. In the judgment of those fully acquainted with the conditions this is a minimum charge.

The average cost of freight by rail from the following tobacco-shipping points in Kentucky to Louisville is 15 cents per 100 pounds of leaf tobacco in hogsheads: Cynthia, Carlisle, Mount Sterling, Winchester, Lexington, Georgetown, Versailles, Harrodsburg, Shelbyville.

The bulk of the crop of burley tobacco produced in Kentucky is sold by the farmers themselves on the Louisville market or the Cincinnati market. The calculations are based on such sales.

Expenses of marketing a 1,000-pound hogshead of tobacco consigned from farmer's depot to Louisville, Ky., worth 9 cents per pound.[1]

(1) Gross cost to manufacturer at Louisville, 1,000 pounds, at 9 cents per pound		$90.00
(2) Distributing expenses:		
Freight to Louisville, 15 cents per 100 pounds	$1.50	
Insurance, commission for selling, and cost of cask furnished farmer by warehouseman, together averaging 42 cents per 100 pounds	4.20	
Additional charges per hogshead in Louisville	2.00	
Drayage from warehouse to factory	.35	
		8.05
(3) Net received by producer		81.95

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[1] Data furnished by Mr. Toe Water, Louisville, Ky.

The gross cost to the consumer is apportioned as follows between distributers and producer for 9-cent tobacco:

Items.	Amount.	Per cent.
Gross cost to consumer is	$90.00	100
Distributing expenses are	8.05	8.9
Net received by producer is	82.95	91.1

At the average price of 9 cents per pound, this is equivalent to saying that out of every dollar paid by the manufacturer of tobacco at this leaf-tobacco market for his raw material the railroads, dealers, warehousemen, and draymen get about 9 cents, and the balance, or 91 cents, goes to the farmer as his net share.

If the Kentucky crop were sold at the low average of 6 cents per pound, which was the average for the United States in 1896, the gross cost to the consumer or manufacturer would be apportioned as follows:

Items.	Amount.	Per cent.
(1) Gross cost to consumer, 1,000-pound hogshead, at 6 cents	$60.00	100
(2) Expenses of distribution	8.05	13.4
(3) Net received by producer	51.95	86.6

At this low average market price the distributing agencies get a far larger percentage of the gross cost to consumer, and the producer gets a correspondingly smaller net return as his share.

(3) *Durham, N. C.*[1]—The following statement gives the cost of marketing leaf tobacco at Durham, N. C., where local manufacturing requires by far the greater proportion of the receipts. In this, as in the other estimates, the figures have been prepared by persons thoroughly conversant with the various elements of expense involved in the movement from local markets to the manufacturing market. The local markets selected are those of Wilson, Rocky Mount, and Kinston, all in eastern North Carolina, from which vast quantities are sold by producers, prized by buyers, and shipped to manufacturers at Durham, N. C., Danville and Richmond, Va. The standard quality of North Carolina tobacco selected for pipe use, and the "cutter" grades used for paper cigarettes, are both subject to shrinkage of about 7 per cent in the course of reordering by steaming process, in preparation for manufacturing. The figures here given are based on immediate use of the tobacco in question upon arrival at the factory. As a matter of fact, however, most leaf tobacco is kept in store 2 years before manufactured for the purposes for which these two kinds are used. Consequently, there must be added storage charges of 10 cents per month per hogshead, interest at 6 per cent per annum on the cost to the manufacturer, and an insurance item of 1 per cent per year. For our own purposes, however, it is assumed that the tobacco is destined for immediate consumption by the manufacturer at Durham.

(*a*) *Grade called "smokers," at 6 cents per pound.*

On this basis the items of cost of handling a 1,200-pound hogshead of leaf tobacco known as "smokers," from the time the farmer delivers it on the floor of the local warehouse until it reaches the manufacturer's warehouse, is essentially as follows, for the locality under consideration.

(1) Expenses of distribution:	
(*a*) Buyer's charges of every kind on net weight of 1,116 pounds (1,200 pounds less 84 pounds, loss in reordering), at $1 per 100 pounds	$11.16
(*b*) Freight, 25 cents per 100 pounds on gross weight of 1,256 pounds (1,116 pounds plus 140 pounds, weight of cask)	3.14
	14.30
(2) Producer received at local warehouse 1,200 pounds, at 6 cents per pound	72.00
(3) Gross cost to manufacturer at Durham, equal to 1,116 pounds net, at $7.73 per 100 pounds	86.30

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[1] Reported by Mr. H. J. Bass, special agent, Durham, N. C.

This cost to consumer is apportioned as follows:

Items.	Amount.	Per cent.
(1) Gross cost to consumer is	$86.30	100
(2) Expenses of distribution are	14.30	16.6
(3) Producer received	72.00	83.4

(b) Grade called "cutters," at 12 cents per pound.

(1) Expenses of distribution:
  (*a*) Buyer's charges of every kind on net weight, 1,116 pounds (1,200 pounds less 84 pounds in reordering), at $1 per 100 pounds . . $11.16
  (*b*) Freight, 25 cents per 100 pounds on gross weight, 1,256 pounds (1,116 pounds plus 140 pounds, weight of cask) . . 3.14

14.30

(2) Producer received at local warehouse (1,200 pounds, at 12 cents per pound) . . 144.00

(3) Gross cost to manufacturer at Durham equal to 1,116 pounds, at $14.18 per 100 pounds . . 158.30

This cost is therefore apportioned among distributers and producer as follows:

Items.	Amount.	Per cent.
(1) Gross cost to consumer is	$158.30	100
(2) Distributers receive	14.30	9
(3) Producer receives	144.00	91

6. METHODS OF MARKETING AND MANUFACTURING TOBACCO IN PENNSYLVANIA.

In Pennsylvania, where wrapper and filler tobacco is grown for cigar-making purposes, the product does not pass directly to the cigar manufactory. Local dealers buy the crop of the farmer, assort it, and prepare it for the manufacturers' market. The producer simply cures the green tobacco, strips the leaf from the stock in November, in suitable states of the atmosphere, binding it into small bundles and cases ready for sale to the dealer. The dealers pack the leaf in cases to put the tobacco through a sweating process. After this they sell to the local manufacturers or jobbers. These are the essential stages through which Pennsylvania leaf tobacco goes between producer and consumer. Sometimes cigar manufacturers working on a large scale act as their own dealers, buying directly from the farmer and preparing the tobacco in their own packing houses, thus eliminating the local dealer.

In Lancaster County, Pa., not 1 per cent of the crop is sold to makers by farmers. Buyers or dealers are numerous and actively compete for the crop. In and about the small borough of Marietta, in this county, there are over 100 dealers in leaf, each of which handles from 100 to 4,000 cases. All this is packed here. Considerable tobacco is received at this packing center from Wisconsin, Ohio, New York, and Connecticut in bulk and boxes to be repacked for the trade. The borough of Marietta itself in 1898 made 4,500,000 cigars, using 43,000 pounds of native seed leaf, 42,000 pounds native Habana seed leaf, and 4,500 pounds Sumatra wrapper tobacco.

(1) The peculiarity of tobacco consumption for cigars in Pennsylvania is the fact that it is largely a village or household industry. In a small town of not more than 200 inhabitants there may be 50 different factories in operation. Almost every village household may have a room devoted to cigar making. The art is easily learned, and this mode of utilizing the leisure time of the members of the family is quite general throughout many parts of Lancaster County. Some larger manufacturer, in many cases, supplies the raw materials, paying the cigar maker a given rate per thousand cigars. In this way the work is done under conditions which require little capital and afford labor profitable employment at home. It

is a survival of a domestic handicraft among a class of labor that owns its own homes and is on good terms with the capitalist.

A rough estimate of the expenses of handling Lancaster County tobacco from farmer to consumer in factory, including packing, is 2 cents per pound. The average price to farmer may range from 6 to 9 cents per pound, thus giving the packing dealer a compensation of 18 to 25 per cent for his work. This does not include any return on capital, any profit, or for risks run in fall of price. The farmer sells his crop between December 1 and April 1, but mostly from February 1 to April 1. The bulk of the crop then passes into the packing house from the farmers' market. This cost includes empty cases, loss in weight, etc. The shrinkage from sweating and age amounts to 15 to 20 per cent in weight, according as the sweat is mild or severe.

The packers are to be distinguished from the jobbers. Packers perform an annual service in the distribution of the crop from producer to consumer, each year taking the portion of the crop they handle through an incidental course ending earlier or later as the case may be. The packer buys generally, as was said, at the February and March sales by growers. They finish the packing of their leaf purchases by the beginning of May. That is, in the course of a month the leaf is either ready for sale to jobbers, to manufacturers, or for the sweating season. All depends on the relation of the price offered by these interests to the price paid to growers. If the pack is put through the sweating process, that takes up the months of July and August. By September the sweating process is complete, the leaf is sampled, and is then ready for market. It has thus been in the packers' hands about 8 months to complete the packing process. He may hold it for a few months more to take advantage of improvement in prices or he may sell to jobbers or consumers. It may be assumed that packing is a year's undertaking.

(2) A widely known packer of Marietta, Lancaster County, Pa., has given the statement of the cost of packing a case of tobacco containing 400 pounds of unfermented weight of leaf as received from the grower.

Cost of packing Pennsylvania leaf tobacco.

Cost of white-pine case	$1.20
Cost of labor in packing	1.00
Cost of 1 year's storage	.50
Cost of inspection and labor attending	.50
Total outlay on 1 case of 400 pounds	3.20
Price paid producer, at 7½ cents	30.00
Interest at 6 per cent on $33.20	2.00
Total cost by end of year	35.20

Shrinkage, 17½ per cent on 400 pounds, gives 330 pounds net, or $10.66 per 100 pounds, or 10⅔ cents per pound, for which packer paid 7½ cents per pound.

There has, therefore, been an actual expense or cost incurred by the packer amounting to 42 per cent on the price paid the producer, without a single cent being allowed for anything but interest on the case of tobacco. If the packer sold at 50 per cent advance on the price paid the grower, he would probably not more than cover expenses, including insurance on buildings, depreciation, and the like.

The jobber, while buying and selling packed tobacco all the year round, usually clears his warehouse by December 1 to make way for the coming crop. He is more of a speculator than the packer. The jobber carries a stock throughout the year, and his services in distribution are purely commercial. Besides the risk run in fall of prices the element of shrinkage is considerable yearly, to compensate which the older fillers get, the more desirable they become.

The local packer or dealer seems to be an essential feature of distribution in all parts of the tobacco trade in which the small domestic manufacturer remains, if not, indeed, also where the factory on a large scale has come into control. This arises from the necessity, in most cases, of packing tobacco for sweating as near as practicable to the place of production. Extensive manufacturers in large cities do their packing in the localities in which the leaf was grown. There appears to be no dissatisfaction with this feature of distribution on the ground of its affecting prices to producers unfavorably. The services of the jobber relate less to local consumption and more to the demands of outside trade. Hence the jobber is allied with the distribution of the supply by rail to centers of manufacture. It is his business to know the relations of the existing supply to the existing demand; hence jobbers' prices are as a rule to be taken as the barometer of the trade. The jobber's position in distribution is that of one whose interest it is to equalize the relations of demand and supply. Hence, in a real sense, his is the focal position between consumer and producer. Through him are reflected the forces in the manufacturing situation that influence the productive situation, and vice versa. He therefore seems to be an indispensable feature of the system of distributing the tobacco crop in such quantities, at such times and in such places as the demands of consumption throughout the world require.

(3) In the distribution of Pennsylvania tobacco the dealer renders a twofold service—first, by carrying a stock for the local manufacturers of cigars, and, secondly, by retaining the stock in the locality for a longer period than the farmer could afford to hold it. The dealer becomes, furthermore, the local manufacturer's banker when he sells to the latter on credit. The independence of the small manufacturer, who can either make cigars at home on his own account or work for some larger manufacturer for wages, prevents the dealer or jobber from taking advantage of his customer without capital. Thus the larger manufacturer competes with the dealer for this field of employment of capital. Finally, dealers are active enough among themselves to insure fair prices alike to the producers and to local consumers.

On the basis that 400 pounds bought at 7½ cents from the producer nets 330 pounds after packing and keeping during a single season, we may now make an estimate of the cost of getting a case of tobacco of 330 pounds net to the New York manufacturer from the farmers' market. The freight from Marietta or Lancaster, Pa., to New York is 17 cents per 100 pounds. Allowing 90 pounds for the weight of the case, the gross weight would be 420 pounds, and the freight charge 71.4 cents per case; allowing, also, 50 cents for ferriage and drayage at terminal, we have $1.21 plus all the expenses from the farmers' market to railway shipping point. These expenses, it will be seen by referring back to the statement on cost of packing, aggregated $5.20, including interest, storage, and inspection. This sum plus freight charges amounts to $6.41 per case—the total cost of distribution.

The summary of the data desired, in finding out what proportion of the cost to the consumer goes to the producer and to distributers, is as follows:

	Amount.	Percent.
(1) Expense of distribution from farmers' market to New York factory	$6.41	18
(2) Producer received	30.00	82
(3) Gross cost to consumer	36.41	100

7. COST OF EXPORTING LEAF TOBACCO.

Out of the annual production of about 620,000,000 pounds of leaf tobacco for the past three years in the United States, there were exported from 270,000,000 to 300,000,000 pounds. In 1897, 44.2 per cent of the crop was sent abroad, the balance, 55.8 per cent, being consumed at home. We export somewhat less than half of our tobacco crop.

The relation of the farm value of tobacco to exporting expenses and to value to consumers abroad is given herewith. The estimates given below for expenses of exporting leaf tobacco have been made by exporters and hold good for shipments from North Carolina and Virginia. They begin with purchases of three different grades of leaf tobacco at farmers' warehouses and include every item of expense to which exports are subject in the usual course of this trade. They therefore represent actual conditions and are taken as the basis of our effort to ascertain what proportion of the value to the foreign consumer (manufacturer) goes to the distributing agencies and what proportion to the producer.

(a) *Expenses of exporting a 1,000-pound hogshead of leaf tobacco.*[1]

[Lowest grade: 3 to 5 cents per pound paid producer.]

Items of expenses in preparation for exportation:	
Grading	$0.70
Reordering by steam	.50
Cask	1.50
Packing	1.50
Drayage	.25
Rent, superintendence, taxes, wear and tear	5.55
Total expenses f. o. b. cars inland market	10.00

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[1] Data supplied by Mr. H. J. Bass, special agent, Durham, N. C.

Total expense of freight, commissions, etc., for delivery to manufacturer in England or Continent	$22.50
(1) Total expenses of distribution	32.50
(2) Cost at farmer's warehouse in North Carolina	$30.00 to 50.00
(3) Gross cost in foreign manufacturer's hands	$62.50 to 82.50

From these figures it appears that the cost to the foreign consumer of this low grade of leaf tobacco laid down at his factory ranges from $62.50 to $82.50 per hogshead, according to the price paid to the producer, which ranges from 3 to 5 cents per pound.

Out of this amount of gross cost $32.50 is to be taken for expenses of distribution. Whatever the price paid the producer, between these limits, the distributing expenses remain constant; that is, whether it be 3-cent tobacco or 5-cent tobacco, the distributing expenses are substantially the same. The balance goes to the producer. The proportion of producer's to distributer's part in the gross cost is as follows:

Gross cost to consumer.	Producer's proportion.	Distributer's proportion.
	Per cent.	*Per cent.*
At $62.50 per hogshead	48	52
At $82.50 per hogshead	60.6	39.4

Evidently the producer's proportion of the market value to the manufacturer increases directly with the price he receives for the tobacco; while the higher the price paid to producer, the lower the proportion that goes to the distributers.

(*b*) *Expenses of exporting a 1,000-pound hogshead of leaf tobacco.*

[Medium grade: 7½ to 9 cents paid producer.]

Items of expenses in preparation for exportation:	
Grading	$0.85
Reordering by steam	.65
Cask	1.50
Packing	1.75
Drayage	.25
Rent, superintendence, interest, taxes, wear and tear, etc	7.50
Total expenses f. o. b. cars inland market	12.50
Cost of shipping (freight), selling, etc., to manufacturer in England or Continent	26.00
(1) Total expenses of distribution	38.50
(2) Cost at farmer's warehouse in North Carolina or Virginia at 7½ to 9 cents per pound	$75.00 to 90.00
(3) Gross cost in foreign manufacturer's hands	113.50 to 128.50

On the basis of this statement the gross cost to consumer of leaf tobacco of this grade, laid down at factory in Europe, is apportioned between producer and distributers in the following manner:

Gross cost to consumer.	Producer's proportion.	Distributer's proportion.
	Per cent.	*Per cent.*
At $113.50 per hogshead	66	34
At $128.50 per hogshead	70	30

It appears again that not only does the producer's proportion of the gross cost to the consumer increase with the increase of the latter value, but that with each increase in value to consumer the proportion to the producer increases and the proportion to the distributers decreases.

(*c*) *Expenses of exporting a 1,000-pound hogshead of leaf tobacco.*

[High grade: 12½ to 22½ cents paid producer.]

Items of expenses in preparation for exportation:	
Grading	$1.50
Reordering by steam	1.10
Cask	1.50
Packing	2.00
Drayage	.25
Rent, superintendence, taxes, wear and tear, etc	8.65
Total expenses f. o. b. cars inland market	15.00
Cost of shipping (freight), selling, etc., to manufacturer in England or Continent	28.00
Total cost of distribution	43.00
Cost at farmer's warehouse in North Carolina or Virginia at 12½ to 22½ cents per pound	$125.00 to 225.00
Gross cost in foreign manufacturer's hands	168.00 to 268.00

On the basis of this statement the gross cost to consumer of this grade, laid down at factory in Europe, is apportioned between producers and distributers in the following manner:

Gross cost to consumer.	Producer's proportion.	Distributer's proportion.
	Per cent.	*Per cent.*
At $168 per hogshead	74.4	25.6
At $268 per hogshead	83.9	16.1

If, in summing up, we compare this series of proportions, we notice that with each rise in gross cost to consumer, or in consumer's value, there is an opposite tendency in the producer's proportion compared with distributer's proportion, into which this gross value is divided. With each rise in consumer's valuation the percentage to the producer increases and the percentage to the distributers decreases.

Items.	Lowest grade.	Medium grade.	High grade.
	Per cent.	*Per cent.*	*Per cent.*
Consumer's cost	100	100	100
Producer's proportion	48 60.6	66.1 70	74.4 83.9
Distributer's proportion	52 39.4	34 30	25.6 16.1

8. WHAT MAKES THE PRICE OF TOBACCO.

Tobacco in the Southern States, in passing from the farm to the factory, goes through two separate sets of hands—the warehouse and the packing house. Usually the farmer brings it from the tobacco barn to the warehouse, when it is divided into small heaps on the basis of quality. Here it is auctioned off at a small auction fee to buyers, who are either manufacturers and their agents or buyers, whose business it is to work over varied lots of leaf in preparation for manufacturers in different parts of the world. The largest manufacturers in the United States have their own buyers located at the leading leaf markets. The thousands of smaller factories, however, depend on the buyers who purchase leaf at farmers' warehouses, work it over, and put it up in hogsheads, according to the requirements of the trade.

(1) The warehouse charges amount to about 6¾ per cent of the value of the tobacco on the warehouse floor. The following details indicate the system of charging for the transactions involved at the public warehouse:

Charges for selling farmers' tobacco from wagons on warehouse floors:[1] Unloading and weighing, 10 cents per 100 pounds, 2½ per cent on gross amount of sale; on lots weighing less than 100 pounds, 15 cents auction fee; lots weighing 100 pounds and over, 25 cents auction fee.

Last season Kinston, N. C., sold 9,234,000 pounds tobacco at an average of $6.30 per 100 pounds, probably sold in lots averaging 150 pounds.

Total number of pounds, 9,234,000, at $6.30		$581,742.00
2½ per cent on amount of sales	$14,544.55	
10 cents per 100 pounds	9,234.00	
61,560 lots of 150 pounds, at 25 cents	15,390.00	
		39,168.55

Cost $39,168.55 to sell $581,742 worth of loose tobacco, or 6¾ per cent of the farm price.

(2) Among the elements of expense in handling leaf tobacco in the South and West must be reckoned that of extra care required in packing, according to the quality of the leaf. The cost of packing low-grade leaf in the South and West averages 75 cents per 100 pounds in the packing houses; for average grades of tobacco it is $1 per 100 pounds, and for wrappers it is $1.25. These figures are practically true of the preparation of tobacco both for domestic and for the export market, but the usual charge for working high-grade leaf for export is as high as $1.50 per 100 pounds.

(3) The relation of the largest tobacco manufacturers to the producer has been the subject of much controversy. It has been alleged that in the United States the effect of the tobacco trusts upon prices has been to depress them.

According to recent statistics gathered by a contemporary journal, it was shown "that about 240,000,000 pounds of tobacco were sold on the warehouse floors in Virginia and North Carolina, to say nothing of South Carolina, which sold about 20,000,000 pounds, making an aggregate of about 260,000,000 pounds sold on the warehouse floors of the three States. Of this amount the American Tobacco Company purchased about 35,000,000 pounds, or less than one-seventh of the amount sold. Now, how can any firm or corporation dictate prices of a raw article when that concern purchases only one-seventh of the amount sold?

As regards this market (Danville, Va.), it is the largest bright loose-leaf tobacco market in the world, the annual sales of which amount to 50,000,000 pounds, and is really the market by which prices on other markets are gauged. On this market the American Tobacco Company buys on the warehouse floors less than one-ninth of the total sales, with several independent firms each buying fully as much as the American.

The presence in market of buyers representing the large manufacturing interests on the one hand and the individual buyers on the other, results generally in a high degree of competition. There are few localities in the South in whose more important leaf markets there is not quite as much competition as there is in the cotton markets. In the case of tobacco, as in that of cotton, a large enough proportion of the crop is always destined for export to prevent any particular interest from having its own way to such an extent as to fix the price. However much to an outsider it may seem that a large buyer may control the market, it is not what other buyers find to be the fact when they enter the market for their own supplies.

Neither the care required in handling nor the warehouse expenses of sale nor the relation of large buyers to the market seem either singly or severally to be accountable for the downward tendency in the prices received by producers for tobacco. Nevertheless, the fact of such tendency, coupled with a more or less constant national yield, is placed beyond dispute. It is also true locally that markets whose total sales have been practically constant have suffered a more or less steady fall in farm prices paid for tobacco.

(4) *Fall in farm value of tobacco.*—One can see how much the farm value of leaf tobacco has fallen by comparing the averages for a series of years at a given market. At Winston, N. C., the following sales were made for the 10 years.

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[1] Figures furnished through the kindness of H. J. Bass & Co. of Kinston, N. C., to represent expenses of marketing at a smaller market.

Sales of leaf tobacco.[1]

Years.	Pounds.	Value.	Average per 100 pounds.
1887-88	8,699,470	$966,739.36	$11.11
1888-89	12,147,045	1,169,374.08	9.62
1889-90	11,198,043	1,387,904.60	12.39
1890-91	16,086,373	1,912,699.87	11.89
1891-92	15,865,133	1,443,727.96	9.10
1892-93	13,841,234	1,227,415.10	8.66
1893-94	15,108,939	965,101.37	6.32
1894-95	13,110,050	930,124.77	7.09
1895-96	15,234,855	1,011,561.92	6.64
1896-97	14,061,912	888,177.98	6.32

[1] From North Carolina Labor Statistics, 1898, p. 33.

It is to be noted that though the quantity has kept pretty constant, the total and the average values have tended to decline. Within the period considered the average price fell from $11.11 per 100 to $6.32 per 100, or 43 per cent. This, too, in one of the best manufacturing markets in the country.

The cost of distribution was not to any appreciable extent increased in this period. If anything, the competition of warehouses for the sale of the producer's crop reduced the expenses of marketing. Nor have the railway charges been increased. Some other cause or causes than expenses of distribution must be sought to account for the decline in prices of leaf tobacco at this market, in the 10 years from 1887-88 to 1896-97. It may possibly in part be found in the crusade against the use of tobacco by the youth—a movement which would logically not stop without affecting adult consumers generally. But this alone is not an adequate explanation.

PART NINTH.

THE DISTRIBUTION OF WOOL.

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1. THE DISTRIBUTIVE SITUATION OF THE AMERICAN WOOL PRODUCER.

The productive area of woolgrowing in the United States has steadily widened westward and is now spread out north and south over the States grouped along the Rocky Mountains, with a tendency to concentrate in the Northwest, in the Southwest, and along the Pacific coast. The centers of consumption tendmores and more to concentrate in the Northeastern States. In 1890, 98 per cent of the wool consumed in the United States, including domestic and imported wools, was manufactured by the 8 states of Massachusetts, Pennsylvania, New York, Rhode Island, Connecticut, New Hampshire, Maine and New Jersey. Among the centere of manufacture Philadelphia ranked first, Providence second, Lawrence third, Lowell fourth, and New York fifth.[1]

It will be seen that the distribution of the domestic wool product involves the accumulation of the greater portion of an annual yield from the most western parts of the country and its disposition among the consuming centers in the most eastern part of the country. Stretching between the principal centers of consumption and the principal areas of production lies a minor group of productive States, consisting of Pensylvania, New York, Ohio, West Virginia, Michigan, and Wisconsin. These States, all lying east of the Mississippi, yield but 14 per cent of the total domestic product, some portions of which are consumed in local mills. The greater portion of the annual wool crop has to be carried across the continent from the producer beyond the Mississippi to the consumer on the Atlantic coast. Somewhat more exactly stated, about three-fourths of the washed and unwashed wool product of 1898, excluding pulled wool, was grown west of the Mississippi River and one-fourth in the States east of the Mississippi River.[2]

The problem of distributing the annual yield is practically a transcontinental movement and partakes of the general nature of this trade and traffic from West to East—that is, the wool clip is first collected at western points of accumulation within the productive areas, thence it is gathered into larger interior points, such as Chicago and St. Louis, or shipped directly East by manufacturers' buyers where the visible supplies are accumulated; from these points the manufacturing stocks in the East are replenished, so far as domestic wool is a factor in the annual consumption by home manufacturers. For the fiscal year 1897–98, 389,000,000 pounds were retained for consumption out of imports and domestic yield; 259,000,000 pounds was the domestic yield, less than half a million pounds of which were exported; hence domestic consumption relies upon the home product for two-thirds of its wool. This indicates in a general way the relative importance of and foreign domestic wool supplies in the American market.

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[1] Census of 1890, Manufacturing Industries, Part III.

[2] Sixth Annual Report Montana Bureau of Agriculture, 1898, page 110

The United States produces only about one-tenth of the world's wool output. Its place in the world's production is further defined by the figures for 1899 by countries. The stocks in the United States vary greatly from year to year.

The following table shows the stocks of domestic and foreign wool in the three principal markets of the United States—Boston, New York, and Philadelphia—December 25, 1899, including wool in bond, as compared with those of the year 1899:

Stocks of wool in three United States markets, December 25.

Year.	Domestic.	Foreign.	Total.
	Pounds.	*Pounds.*	*Pounds.*
1899	53,108,750	60,186,829	113,295,579
1898	90,702,177	113,493,405	204,195,282

There are 1,625 woolen mills in the Northern and Western States, showing a very wide distribution of this industry, though the bulk of the product comes from a few States.

2. NUMBER AND CAPACITY OF WOOLEN MILLS IN THE NORTHERN AND WESTERN STATES.

State.	Number.	Capital.	Capacity.				
			Spindles.	Looms.	Sets.	Cards.	Machines.
Total	1,625	75,521,500+	726,804	67,834	7,378	689	1,650
Arkansas	5	35,000+		38	6	2	
California	9	487,000+	1,400	187	39		
Colorado	1	25,000					
Connecticut	90	5,881,000+	2,024	3,672	309	46	62
Delaware	3	133,000+		250	13		
Idaho	2	10,000+	240	9	2		4
Illinois	31	789,000+	4,100	458	71	6	38
Iowa	15	178,500+	200	13	2		
Kansas	3			17	1		
Maine	79	4,683,000+	21,302	3,402	355	4	6
Maryland	8	260,000+	10,000	374	27		
Massachusetts	276	21,888,000+	222,448	17,714	2,246	334	21
Michigan	25	377,000+	440	141	68	12	43
Minnesota	18	604,000+		121	36		6
Nebraska	2	16,000		6	1		20
New Hampshire	55	2,899,000+	39,280	2,407	391	2	212
New Jersey	53	2,136,000+	87,900	3,915	272	38	
New Mexico	3	10,000+					7
New York	125	6,355,000+	71,025	4,058	693	17	78
North Dakota	1			18	2		
Ohio	63	1,909,000+	10,848	763	144	1	120
Oregon	14	837,000+	80	169	26		5
Philadelphia and vicinity	302	5,684,000+	108,922	15,127	1,055	84	454
Pennsylvania	212	3,865,000+	46,989	6,073	611	37	52
Rhode Island	102	12,530,000+	73,666	6,876	681	104	467
South Dakota	5	400,000+		84	9		
Texas	4	460,000+		140	8		
Utah	9	366,000+	732	132	28		
Vermont	26	340,000+	16,700	828	110		4
Virginia	27	708,000+		225	45		
Washington	2	55,000		48	5		
West Virginia	24	178,000+	4,388	239	55		
Wisconsin	30	1,423,000+	3,880	324	66		
Wyoming	1		240	3	1	2	48

3. STANDING OF THE UNITED STATES IN THE WORLD'S PRODUCTION.

The United States produces about 10 per cent of the world's wool clip. On the whole this country has been stationary as a factor in the world's wool situation for the past 10 years.

Wool product of the United States, 1890 to 1899.

Year.	Pounds.	Year.	Pounds.
1890	276,000,000	1896	273,000,000
1891	285,000,000	1897	259,153,251
1892	294,000,000	1898	266,720,684
1893	303,000,000	1899	272,191,330
1894	298,000,000		
1895	310,000,000	Total	2,837,065,265

Year.	World's wool supply.	United States.
1899	2,681,819,545	272,191,330
1880	1,626,000,000	232,500,000
1870	1,295,000,000	162,000,000

Since 1870 this country has greatly increased the wool clip, but not by any means at the ratio of the world's increase. These causes account for this: The rise of Australia and the Plate River as sources of supply; secondly, the shifting policy of the American tariff for the protection of woolgrowing industry; and, thirdly, the rise of prices of meat leading to sheep raising for food purposes rather than for wool. The woolgrowing industry in the United States is to-day located in the Rocky Mountain States as the result very largely of these factors. Hence productive areas in the West are widely separated from the centers of consumption in the East. This is the main feature in the distribution of the annual yield.

Our wool supply comes quite largely from the Northwestern States. The 10 States which produce about 54 per cent of the total yield are given below:

Ten leading wool States and Territories, 1898.

States and Territories.	Pounds.
Oregon	21,291,872
Montana	20,935,105
California	16,932,993
Texas	16,380,412
Wyoming	13,626,701
New Mexico	12,338,420
Ohio	12,114,953
Idaho	11,617,200
Utah	10,802,376
Colorado	9,958,869
Total	145,998,934
Average imports (1890-1899)	160,841,289
Total United States clip	266,720,684

Imports of wool into the United States, 1890 to 1899.

Year.	Pounds.	Per cent of consumption imported.
1890	105,431,285	28.4
1891	129,303,648	31.8
1892	148,760,652	33.6
1893	172,435,838	36.2
1894	55,152,558	15.6
1895	206,033,906	39.8
1896	230,911,473	46
1897	350,852,026	57.8
1898	132,795,302	32.8
1899	76,736,209	19.2
Total	1,608,412,897	....

4. RANGE AND VARIETY OF WOOL PRICES.

Wool is one of the most widely diffused products of the American farm. It is produced under a vast variety of conditions. This fact accounts largely for the unusual variety of grades and kinds which enter into the commercial movement. Wool prices in the price columns of the trade journals are quoted from at least 15 States in 95 different classes, to say nothing about the kinds and classes that come from Australia, England, Ireland, Canada, Argentine, East India, Russia, and China.[1]

Wool prices.

OHIO, PENNSYLVANIA, AND WEST VIRGINIA.

	Cents.		Cents.
XX, etc	34-36	⅜ blood combing	30-32
X	30-32	¼ blood combing	32-34
Unmerchantable	25-26	Coarse combing	27-28
Fine unwashed	22-23	½ blood combing	28
Fine Delaine	34-35	⅜ blood combing	28-30
½ blood combing	32-33	¼ blood combing	27-29

NEW YORK, MICHIGAN, AND WISCONSIN.

[Washed.]

X and XX	24-26	¼ blood combing	27-28
Unmerchantable	21-22	Coarse combing	26-28
Fine Delaine	33-35	½ blood clothing	26-28
½ blood combing	28-32	⅜ blood clothing	26-28
⅜ blood combing	28-32	¼ blood clothing	25-27

MISSOURI, ILLINOIS, AND IOWA.

[Unwashed.]

Fine	19-20	Braid combing	20-22
¼ blood combing	21-22	½ blood clothing	20
⅜ blood combing	22	¼ blood clothing	20-22
¼ blood combing	20-22	⅜ blood clothing	20-21
Common combing	18-19	Coarse clothing	18

INDIANA AND KENTUCKY.

⅜ combing	24-26	⅜ clothing	22-24
¼ combing	22-23	¼ clothing	22-23
Common combing	20-22	Low clothing	19-20
Braid combing	20-22	Georgia and Southern	22
Medium short combing	19-20		

TEXAS.

Fine, 12 months	22-25	Medium spring, 6 to 8 months	18-20
Fine, medium	20-24	Fine and fine medium, fall	18-19
Medium, 12 months	18-21	Medium, fall	16-17
Fine and fine medium, spring, 6 to 8 months	18-20		

[Scoured basis.]

Fine, 12 months	58-60	Fine, medium spring, 6 to 8 months	52-55
Fine, medium 12 months	56-58	Medium, spring, 6 to 8 months	48-50
Medium, 12 months	54-56	Fine and fine medium, fall	46-48
Coarse, 12 months	48-50	Medium, fall	43-45
Fine, spring, 6 to 8 months	52-54		

KANSAS AND NEBRASKA.

Fine, choice	18-20	Fine, average	17-18
Fine, medium choice	18-19	Fine, medium average	17
Medium choice	18	Medium, average	16-17
Quarter	17	Quarter, average	15-16

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[1] This list of wool prices is taken at random from the New York Commercial, July, 1900, to illustrate the fact of great variety in grades and prices.

Wool prices—Continued.

DAKOTA.

	Cents.		Cents.
Fine, choice	20-22	Fine, average	18-20
Fine, medium choice	18-21	Medium, average	17-20
Medium, choice	18-20	Fine, medium average	17
Quarter	17	Quarter, average	16

[Scoured basis.]

New spring, free, 8 to 12 months	58-62	Southern, 12 months	58-60
New spring, free, 6 to 8 months	55-58	Southern, 6 to 8 months	53-56
Fall, defective	45-48	Fall, free	48-51

[Scoured basis.]

Eastern, No. 1	60	Valley, No. 2	51-53
Eastern, No. 2	54-55	Valley, No. 3	46-47
Valley, No. 1	57-59		

PULLED WOOLS.

[Scoured basis.]

Extras (clean)	63-65	Combing	44-46
Fine A	58-59	California, finest	61-62
A supers	52-51	California, second	59-60
B supers	48-49	Western, extra	57
C supers	37-40	Western, superior	45-46
Fine, combing	55-58	Western, low	34-36

FOREIGN.

[Australian—Scoured basis.]

Port Philip combing	88-90	Cape clothing	70-72
Port Philip 60s	80-85	Cape combing	72-75
Adelaide combing	80-82	Mont. (greasy)	30-33
New Zealand combing	74-76	Merino	35-36
Fine, crossbred	72-75		

ENGLISH, IRISH, AND CANADIAN.

Irish bogs	27-28	Sussex tegs	27-28
Irish wethers	26-27	Sussex ewes	26-27
Shropshire bogs	27-28	Canadian combing	34-36
Shropshire wethers	26-27		

CARPET.

Aleppo	18-20	China, comb	15-17
Angora	12-14	Cordova	14-15
Bagdad, blk	20-21	Donskoi, auts	17-18
Bagdad, fa's	20-22	Donskoi, co'g	19-21
Bagdad, wh's	22-23	Donskoi, col's	15-17
Bokhara, c'rs	14-15	Donskoi, l'm's	17-18
Bokhara, w'ts	16-17	Scotch	15-16
Camel's hr. R	13-14½	Valparaiso	13½-14
China, ord	13-14		

EAST INDIA AND ASIATIC.

E I, Jor & Vic	25-26	Karadi, ord	17-18
E I, Kandah'r	24-25	Khoras'n, cols	14-15
E I, car fill, ch	15-16	Kohras'n, w'e	18-19
E I, car fill, l'w	12-14	Mohair, T'r'h	52-55
Georg'n, B. O	16-17	Mossul, washed	18-19
Georgian, B	14-15	Mossul, unwashed	14
Georgian, B. S	13-14	Oporto	17
Karadi, ch's	17-19	Salonica	12

Wool in national policy has alternately been regarded from the standpoint of the producer and of the consumer of wool-made goods. Prices of raw wool rose with protection of the domestic product against foreign importations, and fell with the removal of that impost. The settled policy of more recent years has given the woolgrower a firmer basis of investment, and prices have accordingly maintained a more or less persistent level.

The leading wool markets are located in the East near the centers of consumption, of which Boston, Philadelphia, New York, and Baltimore are the most important. The Western wool markets are receiving points for the raw material and serve as primary markets for the producer. Of these Chicago and St. Louis received 32,517,076 pounds of wool all by rail. The receipts at Chicago for 1898 were 39,168,416. The receipts at New York are quite largely "pulled wool," derived from the slaughter of sheep at that port and vicinity. This yield amounts to 6,000,000 pounds a year. The prices given below are for St. Louis and New York. The Eastern and the Western markets compete now so actively as to give these prices a standard character for general purposes of comparison.

Range of prices of wool.

[Crop Reporter, January and November, 1900.]

Dates.	XX washed, New York, per pound.	Best tub washed, St. Louis, per pound.
January, 1896	19 -19	20 -21
January, 1897	17½-17½	20½-21¼
January, 1898	30 -31	30 -30
January, 1899	28 -29	26 -26
February	28 -29	26 -26
March	28 -29	25¼-26
April	28 -29	26 -26
May	28 -29	26 -26¼
June	28 -29	27 -27
July	28 -29	26 -26¼
August	30 -32	26½-27
September	30 -32	26¼-27¼
October	30 -33	28 -28½
November	32 -36	29 -32
December	36 -39	34 -35
January 3, 1900	36 -39	36 -35
June, 1900	34 -36	28 -32¼
October, 1900	28 -30	29 -29

From this it appears that the New York price of washed wool has almost, if not quite, doubled since January, 1896. It has more than doubled since the lowest level of prices of 1897. The upward course of prices has been more constant than that of most other agricultural products.

5. ONE MAIN CAUSE OF LOW PRICES.

The element of weakness in the commercial position of the American wool producer is a necessity arising from the agricultural situation throughout the wool-growing world. The immense hazard of staking farm capital in a single product, in view of all the vicissitudes of agricultural prices, has almost revolutionized sheep husbandry. Just as the meat-consuming capacity of Western peoples has helped to lower the price of cereals and consequently to discourage agriculture and favor stock raising, so has meat eating caused sheep husbandry to substitute for fine wool-bearing Merinos crossbreeds of sheep, from which to produce saleable mutton when wool prices are unprofitable, or coarser grades of wool when mutton prices prove unprofitable. The Boston Commercial Bulletin's analysis of this situation up to August, 1898, as affected by the extensive increase of coarse-wooled sheep at home and abroad, is still substantially true. "The most important phase of the general wool market," it says, "is the accentuated diminution of the fine-wool supply, resulting from the world-wide change in breed that has been in progress for 10 years or more. The users of fine wools are beginning to fear the possibility of a famine in the Merino stocks as the outcome of this remarkable transformation. The clip of the Argentine Republic has been most strikingly affected by the wholesale abandonment of Merino for the crossbred; but the consequences of the change in that country are accentuated by the continued shortage in the Australian clip. In 1890 the Argentina clip was 300,000 bales, 95 per cent of which was Merino; in 1898 the Argentina clip is 500,000 bales, 75 per cent of which is crossbred. Here is a shortage of 160,000 bales of fine wool from Argentina, comparing 1898 with 1890. The Australian clip of 1896 was 134,000 bales short of the maximum supply (1894) from that country, the clip of 1897 making a net loss of at least 350,000 bales from the maximum supply of that country, all but about 25 per cent of which can be reckoned as Merino. Reckoning the Argentina bale as two and one-half times the Australian, we have a total loss of about 750,000 bales of fine wool (on the basis of the Australian bale) from the maximum supply, with a tendency on the part of fashion to require an increased use of fine wools.

"In the above analysis no cognizance is taken of the similar change to medium and crossbred wools which has been going on in the domestic clip for some time, as annually noted in these reports. It has proved impossible to statistically measure this change, but we estimate that not over 20 per cent of this year's clip can be called fine or medium-fine wool. The constantly increasing use of mutton in our country has been a controlling factor in bringing the change about; that it has been carried too far, where there remains the purpose to make the wool the chief product, is coming to be realized. Our correspondence indicates a growing recognition of the fact, and in some sections of the country a well-developed tendency to swing back to Merino blood. It will be 2 or 3 years at best before this tendency will show itself in the clip. In the meanwhile American users of fine wools must depend largely upon foreign supplies, which will result in still further advancing the foreign value of Merino wools, as compared with crossbreds."

6. THE DIVIDED POLICY OF SHEEP HUSBANDRY.

The position of the wool producer in relation to the wool market is dependent on his accessibility to the mutton market and on the extent of competition with domestic and foreign grades of wool in meeting domestic consumption. Considering the latter factor first, under the present tariff, ranging from 4 cents to 12 cents per pound, both mutton and wool have improved in price. Regarding the tariff as a constant factor in farm prices of wool, we may be certain of a tendency to increase in domestic supply and a decrease in foreign importation of wool in the future as in the past few years. This will go on until domestic production overtakes domestic consumption. But this result will not be reached for all required grades of wool until the production of wool and of mutton become differentiated as controlling objects of the sheep industry; because the quality and quantity of fine wools required in our manufactures can not be domestically produced until this differentiation of commercial purpose shall have been developed to the point of meeting the demands of the consumer for all grades of wool. If, therefore, the policy of sheep husbandry be divided against itself to such an extent as to be indifferent as to whether mutton is the main product and wool the by-product of the flock, or vice versa, then the level of prices is pretty sure to fall in the near future from increased production of inferior grades. In that case, in spite of increased domestic supply, the foreign producers of the finer grades will still have to supply our wool-consuming industries regardless of a protective tariff. The commercial position of the wool producer in the United States is conditioned, therefore, upon his capacity to supply the consumer with less of what might be called competitive and more of the noncompetitive grades of wool. The expenses of distribution between producer and consumer are substantially the same for the lower as for the higher grades, but the competition between producers of lower grades is apt to be far more intense than that between producers of higher grades. The producer of first-class wool is not only far more highly protected than the producer of lower grades, but he is largely relieved from competition with producers of lower commercial grades; he may be one of a hundred. The producer of second-class wool may be one of a thousand, and the producer of third-class wool one of ten thousand. The lower the commercial grade of the product the more competition of producers tends to lower the price to consumers and thus reduce the proportion of consumers' price that goes to producers. The proportion that goes to the distributive agencies tends to remain constant for all grades.

7. APPARENT EFFECT OF THE TARIFF OF JULY, 1897, ON PRODUCERS.

This is the general theory as to the wool producers' situation in the United States, under conditions of equal freedom as between producer and consumer. There are, however, some factors which appear to stand in the way of this development in the commercial position of wool producers. There is a very general conviction among woolgrowing interests that the tariff act of July, 1897, operates primarily in favor of the consumer and is of comparatively little value to the producer. It is alleged to be notoriously true "that the average price of wool in our chief Eastern wool-market cities is, and for a year (1898) has been, about 3 to 5 cents *per* unwashed pound less than the 'importing point'—that is, less than the London world's market price of similar wools with freight and duty added."[1] If this is a fact, the wool producer had not as yet, within the period of a year and a half following the tariff act, reaped the full benefit of this protective measure.

This low level of domestic wool prices then ruling has been explained by the producer by alleging an agreement among consuming manufacturers as to the price to be paid for home-grown wool. Consumers have explained lower prices by lack of demand. On these two theories it may be said that, as to the first, no consumers are more fully informed as to the relations of supply and demand in any commodity than the wool manufacturers of the United States. Not only is this so, but it is equally true that they are as fully aware of the extent to which low-priced foreign wools bearing a minimum import duty can be substituted in manufacturing textiles for the comparatively high-priced wools of domestic production.

There is in that case, therefore, nothing to prevent a third-class unwashed imported wool, for example, which comes in at a low tariff rate, from serving the purpose of a substitute for a much higher domestic grade of wool for purposes of manufacture. If that be the case, then it is evident that the development of the better grades of American-grown wool, on which improvement in the producer's commercial position depends, is carried on under an abortive protection. The producer's relation to the consumer is, under these conditions, such that the domestic consumer can depress the price of domestic wool by the importation of substitute grades or by undervaluations[2] to the level at which the producer is wise to let his wool go into the market and ultimately to let woolgrowing go altogether, except as wool may be made a minor by-product in American farm policy. Hence mutton and not fine wool is the key to the wool producer's situation in the United States.

8. SHRINKAGE AS A FACTOR IN DISTRIBUTION.

The distribution of wool between producer and consumer involves a shrinkage in weight by scouring which makes it difficult to arrive at the proportion of producer's prices and distributer's expenses included in the consumer's price. The following table gives a correct idea of how great a reduction scouring involves, as well as how much the reduction varies in different productive areas:[3]

Wool product of the United States, 1898, by States.

State or Territory.	Number of sheep, April 1.	Average weight.	Wool, washed and unwashed.	Per cent shrinkage.	Wool, scoured.
Maine	226,851	6	1,361,106	42	789,441
New Hampshire	74,221	6.5	482,437	55	217,096
Vermont	156,274	7	1,093,918	57	470,384
Massachusetts	40,395	5.5	222,173	42	128,860
Rhode Island	10,564	5.5	58,102	42	33,699
Connecticut	30,265	5.5	166,458	42	95,545
New York	793,254	6	4,759,524	50	2,379,762
New Jersey	39,096	5	195,480	47	103,604
Pennsylvania	763,989	5.75	4,392,937	52	2,108,620
Delaware	12,479	5	62,395	46	33,693
Maryland	126,619	5	633,095	47	335,540
Virginia	363,813	5	1,819,065	42	1,055,058
North Carolina	273,890	5	1,369,450	43	780,587
South Carolina	66,540	5	332,700	44	186,312
Georgia	318,370	4	1,273,480	40	764,088
Florida	74,159	4	296,636	42	172,049
Alabama	204,001	4.25	867,004	42	502,862
Mississippi	245,580	4	982,320	42	569,746
Louisiana	116,754	4.5	525,393	50	262,697
Texas	2,520,068	6.5	16,380,442	70	4,914,133
Arkansas	131,162	4.25	557,438	42	323,314

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[1] Ohio Agricultural Report, 1898, p. 745.

[2] See House Ex. Doc., No. 101, 48th Cong., 1 sess., for accounts of systematic undervaluation of imported wools.

[3] Montana Report, p. 110.

Wool product of the United States, 1898, by States—Continued.

State or Territory.	Number of sheep, April 1.	Average weight.	Wool, washed and unwashed.	Per cent shrinkage.	Wool, scoured.
Tennessee	309,080	4.5	1,390,860	43	792,790
West Virginia	422,952	5.5	2,326,236	48	1,209,643
Kentucky	617,131	5	3,085,655	37	1,943,963
Ohio	2,307,610	5.25	12,114,953	50	6,057,476
Michigan	1,312,018	6.75	8,856,122	53	4,162,377
Indiana	643,810	6	3,862,860	45	2,124,573
Illinois	583,133	6.25	3,644,582	50	1,822,291
Wisconsin	688,608	6.5	4,475,952	52	2,148,457
Minnesota	395,535	7	2,768,745	58	1,162,873
Iowa	555,448	6.5	3,610,412	58	1,516,373
Missouri	629,211	6	3,775,266	52	1,812,128
Kansas	220,993	8	1,767,944	67	583,421
Nebraska	258,977	8.5	2,201,305	69	682,104
South Dakota	343,414	6	2,060,484	60	824,194
North Dakota	342,793	6	2,056,758	60	822,703
Montana	3,101,497	6.75	20,935,105	62	7,955,340
Wyoming	1,703,338	8	13,626,704	68	4,360,545
Colorado	1,475,388	6.75	9,958,869	68	3,186,838
New Mexico	2,741,871	4.5	12,338,420	53	5,799,057
Arizona	803,822	7.75	6,229,621	70	1,868,886
Utah	1,800,396	6	10,802,376	65	3,780,832
Nevada	526,988	7.5	3,952,410	68	1,264,771
Idaho	1,548,960	7.5	11,617,200	68	3,717,504
Washington	726,302	8.5	6,173,567	72	1,728,599
Oregon	2,580,833	8.25	21,291,872	71	6,174,643
California	2,418,999	7	16,932,993	66	5,757,218
Oklahoma	24,463	7	171,241	66	58,221
Total	35,671,914	6.44	229,860,065	61	89,545,210
Pulled wool	....	....	36,860,619	40	22,116,371
Total product	....	....	266,720,684	....	111,661,581

9. METHODS OF MARKETING WOOL.

Where production is carried on extensively the producer usually deals more directly with the trade. He may receive bids for his clip from wool-buying houses in the East or West, as the owners of the great sheep ranches do in Montana; or he may be visited directly by the agents of the wool interest, either dealer or manufacturer. The latter method of buying, through agents who travel for the purpose and are sent out each season, is quite generally followed throughout the country where wool is a feature of production. More general still is the practice, especially east of the Mississippi, of the growers selling locally to the home buyer or dealer. This local buyer's charge, when buying for an Eastern dealer or manufacturer, is generally from 1 to 2 cents per pound.

Montana now yields the largest wool clip in the United States. The tendency of the wool industry is toward the Northwest and the Southwest. In these two localities the methods of marketing have made most advances. Montana, in the Northwest, has three leading markets, at which more than half of the 21,000,000 pounds of wool is concentrated for marketing. These are Great Falls, where 6,000,000 pounds have been sold in 1898; Billings, whose market record equals 4,000,000 pounds; and Big Timber, where 2,500,000 pounds were marketed. Here, according to the secretary, Mr. Cornelius Hedges, of the State board of sheep commissioners, an important improvement in the method of marketing wool has been brought about by the introduction of the wool exchange. By this system the wool buyers at the principal markets have what is known as a common meeting place or exchange, to which market the owner of wool brings his product, lists it on the exchange without charge, and at the appointed time receives bids on it from the various buyers present. This plan is proving far more satisfactory to the woolgrowers than the system of private sales to buyers that prevailed hitherto. It is employed, of course, only at the larger centers of wool receipts, where buyers appear in sufficient numbers to make the bids competitive.

Another feature in the Southwestern wool market deserves mention. While not general enough to regard it as a fixed feature of wool marketing, this practice of offering to woolgrowers free warehousing in order to enable them to take advantage of future rise in prices has no doubt improved the position of the producer wherever it has been tried. The motive of the trade center in which dealers unite to afford this storage is of course to increase receipts at that particular market. There is no reason why producers themselves might not, on their own account, unite in maintaining cooperative storage facilities.

10. THE EXPENSES OF DISTRIBUTION.

What does it cost to gather wool from the point of production to the primary market and thence to the Eastern manufacturer? In more or less exact form this can be ascertained for a few important points in the movements from the shipping station to the factory.

Taking St. Louis as a wool-receiving and wool-shipping center, two rates are named—one is for scoured wool, which is only loaded to 10,000 pounds on account of the bulky nature of the wool after the grease is taken out; and the other is for wool in grease, minimum weight of carload 20,000 pounds. All this wool is forwarded by the slow lines, via all-rail lines, and rates are as follows:

From East St. Louis, Ill., to—	Carload, 10,000 pounds (per 100 pounds).	Carload, 20,000 pounds (per 100 pounds).
	Cents.	*Cents.*
Boston, Mass., or Providence, R. I	71½	46½
New York	65½	41½
Philadelphia, Pa	63½	39½

The more important centers of consumption are Boston, Philadelphia, New York, Chicago, St. Louis, Providence, Hartford, Troy, and Winston-Salem.

The wool movement from different parts of the country is almost wholly eastward for consumption, while the area of production tends steadily westward, thus increasing the distance between the bulk of consumption and the bulk of production. The shipment eastward from the trans-Mississippi States is usually made direct from grower to consignee, who handles the shipment in any one of the leading markets, such as Boston and Philadelphia. Woolgrowing in these States, especially in the more northwestern States, is carried on not as an adjunct of mixed farming, as is the case in the Central States, but as an industry on a large scale—a single grower may have as much as 50,000 pounds per year to market. He ships direct to the Eastern markets from which distribution is made to manufacturers. Unless Eastern dealers send buyers into the woolgrowing territory this wool reaches the manufacturers without any middleman's services except those of the railroad and the consignee.

There is therefore but one charge prior to the wool's entrance into the consumer's market. From the Northwestern States to Philadelphia, and through this market to the consumer or factory, the cost of handling would be about from 3 to 4 cents per pound, as estimated by a representative of the trade. If wool from the "Territories," however, sells for 20 cents a pound in the Philadelphia market to the manufacturer, the distributing agencies would receive at the utmost 20 per cent of the value and the producer would receive 80 per cent as his proportion. At 3 cents as the cost of distribution, the distributer's share would be 15 per cent and the producer's the balance, or 85 per cent. If the price falls as low as 16 cents for this kind of wool, the distributing expenses would amount to 25 per cent of its value and the producer's proportion to 75 per cent of its value, at the cost of 4 cents per pound for distribution. If the price rises to 24 cents a pound, the expense of distribution, at 4 cents a pound, would be 16⅔ per cent of the value to the consumer, leaving 83⅓ per cent of the value for the producer. Assuming, therefore, that the distributing expenses, such as rate of commission in buying and selling and the freight rates, are a constant factor, it is evident that with the fall in prices toward a minimum the producer tends to get a diminishing proportion of the consumer's price and the distributing agencies an increasing proportion; and on the contrary every rise of prices toward a maximum increases the proportion which the producer gets and decreases the proportion which the distributer gets out of the price paid by the consumer. It is apparent from this that producers of farm products are especially interested in the maintenance of high prices, and that the distributers are primarily interested in the maintenance of constant or lower prices, while the net income of the distributer depends upon the volume of the trade handled at a given rate. There is apparently in this fact the strongest possible reason for combination among producers, and an equally strong reason for producers to be thoroughly informed upon the conditions of the trade and the prospects of the clip.

Great Falls and Billings are by far the largest wool-shipping points in Montana and on the two different lines operating in the State. The rates from Benton, on the Great Northern, would be the same as from Great Falls, and from Big Timber, on the Northern Pacific, the same as Billings. The railroads, we are advised, fix a schedule of rates for each year good only for that shipping season.

Statement showing rates on wool, carloads and distances from points named below to Boston, Mass., and Philadelphia, Pa.[1]

TO BOSTON, MASS.

[Rate in cents per 100 pounds.]

From—	Distance.	Compressed.		Uncompressed.	
		All rail.	Rail and water.	All rail.	Rail and water.
	Miles.				
San Angelo, Tex	2,265	163	139½	160	136½
Dalles, Oreg	3,368	125	....	....	....
St. Louis, Mo	1,186	51½	46½	....	....
Lancaster, Mo	1,243	82½	77½	....	....
Adena, Ohio	752	[2]52	[2]46	....	....
Glasgow, Ky	1,128	[3]120	....	....	....
Mayfield, Ky	1,218	[4]90	[4]86	....	....

TO PHILADELPHIA, PA.

[Rate in cents per 100 pounds.]

From—	Distance.[1]	Compressed.		Uncompressed.		Route.
		All rail.	Rail and water.	All rail.	Rail and water.	
	Miles.					
San Angelo, Tex	1,962	161	137½	.....	....	Southwestern Freight Commission.
Dalles, Oreg	3,046	125	....	.....	....	Oregon Railroad and Navigation Co.
St. Louis, Mo	975	41½	39½	.....	....	Toledo, St. Louis and Kansas City.
Lancaster, Mo	1,087	75½	70½	.....	....	Chicago, Burlington and Quincy Railroad.
Adena, Ohio	449	[2]41	....	.....	....	Wheeling and Lake Erie Railroad.
Glasgow, Ky	888	[3]112	....	.....	....	Louisville and Nashville Railroad.
Mayfield, Ky	1,028	[4]83	[4]79	.....	....	Illinois Central Railroad.

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[1] From the Interstate Commerce Commission.

[2] Combination on St. Louis.

[3] Combination on Louisville.

[4] Combination on Paducah.

13. WOOL RECEIPTS AND SHIPMENTS AT CHICAGO, 1853 TO 1898, INCLUSIVE.

[From the Chicago Trade and Commerce.]

Years.	Receipts.	Shipments.	Years.	Receipts.	Shipments.
	Pounds.	*Pounds.*		*Pounds.*	*Pounds.*
1853	1,030,000	953,100	1876	57,099,828	61,145,966
1854	751,838	536,791	1877	45,602,889	45,316,422
1855	1,969,299	2,158,462	1878	43,428,403	43,000,697
1856	1,853,920	575,908	1879	48,890,549	47,513,638
1857	1,116,821	1,062,881	1880	40,195,696	38,537,102
1858	1,053,626	1,038,674	1881	45,343,995	49,588,096
1859	918,319	934,595	1882	36,660,990	45,208,863
1860	859,248	839,269	1883	40,433,104	44,360,187
1861	1,184,208	1,360,617	1884	42,009,301	53,531,926
1862	1,523,571	2,101,514	1885	48,868,365	51,901,022
1863	2,831,194	3,435,967	1886	34,781,587	41,214,882
1864	4,304,388	7,554,379	1887	26,782,843	32,915,993
1865	7,639,749	9,923,069	1888	30,517,316	46,693,346
1866	12,200,640	12,391,933	1889	28,839,182	43,206,572
1867	11,218,999	11,293,717	1890	22,281,570	39,006,263
1868	12,956,425	13,101,162	1891	35,049,664	57,189,677
1869	8,923,663	8,273,924	1892	28,388,364	44,396,698
1870	14,751,089	15,826,536	1893	28,451,768	36,502,734
1871	27,026,621	24,351,524	1894	51,544,381	69,101,205
1872	28,181,509	27,720,089	1895	51,371,694	63,441,329
1873	34,486,858	32,715,453	1896	44,894,651	54,078,833
1874	45,018,519	39,342,721	1897	35,464,564	42,556,430
1875	49,476,091	51,895,832	1898	29,346,[illegible]48	39,168,416

14. THE WOOL TRADE OF THE PACIFIC COAST.

Wool goes to market in California in what is known as woolpacks, which cost 34 cents per bale—the bales averaging 330 pounds in weight—as against 31 cents in 1899.[1] Three-fifths of the crop is sold at interior points, payable cash there when weighed, any loading charges being paid by the buyer. When so bought in the country no commission is charged, as the wool is sold by the grower direct to the purchaser. The other two-fifths of the crop is sent to the commission men in San Francisco, who charge one-half cent per pound as commission on such wool. There are further charges of drayage of 10 cents per bale from cars to warehouses; storage for 1 month at 15 cents per bale; and an additional 15 cents per bale for every month the stuff remains in store. There is also insurance for the time the wool is in store at the the rate of 1 per cent for 12 months. The country charges for loading average about 5 cents per bale; shearing costs from about 6 to 8 cents per head, and the yield per head will average 10 pounds per head for both spring and fall in the southern part of the State, and 7 pounds per head for both spring and fall in the northern part of the State.

Wool rates from California productive points.

	To San Francisco.	
	Distance.	Per 100 pounds.
	Miles.	*Cents.*
Los Banos	59	$0.33
Merced	144	.31
Fresno	302	.51
Tulare	48	.60
Bakersfield	751	.60
Marysville	163	.26
Willows	43	.16
Red Bluff	1,087	[2]1.00
Redding	4	.77
Montague	27	1.17
Ste. Margarita	6	.18¼
King City	3	.15

[2] Per bag.

Prices and expenses of distribution at Portland, Oreg.

Year and month of sale.	Kind and grade of product.	Consumer paid per pound.	Producer received per pound.	Combined expenses of distribution per pound between producer and consumer.	Percentage of consumer's price to distributors.	Percentage of consumer's price to producers.
		Cents.	*Cents.*	*Cents.*	*Per cent.*	*Per cent.*
July, 1899	No. 1 wool	12	11.29	0.71	5.91	94.09
January, 1900	do	15	14.18	.82	5.46	94.54

The wool business as it is now handled in Oregon and Washington undoubtedly militates against the best interests of the grower. Practically everything is handled "in the grease," and as the limited scouring-mill capacity and demand for stock for local mills takes up but a very small proportion of the vast output of the 2 States, the loss to the grower through freight on grease and dirt is very heavy. Owing to the fact that such a large proportion of the clip is shipped to the Eastern markets, buyers for these markets practically fix the price for the clip and the local mills are not obliged to pay any premium over that paid by the Eastern buyers. The figures given above are the Portland prices paid by buyers for both the mills and for shipment to the East, and are representative of the prices paid by the scouring mills. Leading point at which stocks are accumulated for shipment are The Dalles, Oreg., for the districts east of the Cascade Mountains, and at Corvallis, Oreg., for the Willamette Valley wool. The freight from Corvallis to Portland, a distance of 97 miles, is 26¼ cents per 100 pounds; from The Dalles, a distance of 88 miles, 25 cents per 100 pounds. The latter point is on the Columbia River and is the shipping point for the largest wool district in Washington, the wool being taken from the ranches by team and ferried across the Columbia River. It is also an equally prominent accumulating point for Oregon wool. A large scouring mill is now in course of construction at this point. Other eastern Oregon points of nearly equal importance are Heppner, Oreg., and Pendleton, Oreg., a scouring mill being in operation at the latter place. Wool dealers who handle the stock on commission charge 5 per cent on small lots and 2½ per cent on large lots. The cost of distribution as figured above is based on an average between these rates. There has never been any well-directed effort toward perfecting a combination among the buyers, so that in this respect the grower undoubtedly gets about all that could be expected out of his wool in the grease state. A not infrequent practice among growers is that of "pooling" a number of small lots into one large lot and either consigning it to be sold on commission or asking bids from different buyers. This of course proves beneficial, as in the first case it lessens the expense of commission in selling, and in the second secures the premium which is always paid for a large lot over a number of scattered small lots which must be collected by the purchaser.

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[1] Reported by Mr. T. C. Friedlander, special agent, San Francisco, Cal.

15. LOCAL CONSUMPTION AND FARM PRICES.

An effort was made in the case of wool, as in the case of cotton, to ascertain what effect the existence of local mills had upon farm prices, and on what basis these local mills bought for their own consumption. The following reply from the secretary of the Clinton Woolen Mills, of Clinton, Mich., is taken to represent the position of this kind of demand in relation to the general market and in relation to the producer. It is seen from the statement made in this connection that while small local mills do not influence the general level of prices throughout any considerable territory, they nevertheless do contribute appreciably to the reduction of the difference between the average farm price and the price at seaboard markets—that is, the effect of these local markets is to keep the charge for distribution from such points to the Eastern markets at a minimum. How this affects the producer the letter in question explains, as follows:

UNITED STATES INDUSTRIAL COMMISSION,
Washington, June 1, 1900.

MY DEAR SIR: This agency of the United States Industrial Commission is making an inquiry into the factors which enter into the determination of farm prices. As your mills are located in a district where farmers produce wool, we should like to ask of you on what basis you buy for your own consumption—that is, do you take into account the Chicago prices or Eastern prices at Boston or Philadelphia, and then deduct freight to these points and make the balance your basis of price which you ought to pay, or what you have to pay? Or does the price you usually have to pay to get wool run higher than this difference between the price of Eastern consuming centers and freight from Michigan points to the East?

We are trying, as you may see, to ascertain to what extent the mills and the trade in your locality actually compete for the farmers' wool product. Any information you may be able to give me on this subject will be heartily appreciated.

We inclose franked envelope for reply, and thanking you in advance, beg to remain,

Yours, sincerely,
JOHN F. CROWELL, *Expert Agent.*

SECRETARY CLINTON WOOLEN MILLS,
Clinton, Mich.

CLINTON, MICH., *June 4, 1900.*

DEAR SIR: Replying to your communication, would say that we base our prices to farmers (or try to do so) on the values of wool on the seaboard markets, allowing about 2 cents for the cost of getting the wool there and selling same. There can be no absolute rule, however, to guide one. There are so many different grades of wool, and so various is the condition of different lots, and so many buyers whose judgment differs both as to grade and condition, that statistics on this point will, as it seems to me, have but little practical value. Then there are a new lot of buyers every year who think there is a mine of wealth in the wool business, and who have to get their eye teeth cut in some way; these men go around and pay 1 or 2 cents more than the wool is worth based upon market reports, trusting to an advance or to luck to bring them out without loss, so that the farmer usually gets the benefit, anyway. Then the value of wool in the markets varies with the ideas of the commission men. Some of them are "bulls" and some are "bears." Two reports received by us this morning illustrate this point. One of these quotes Michigan fine unwashed at 18-19, while the other quotes the same grade at 20-21. Both these reports are from Philadelphia and both are of same date.

Yours, truly,
W. G. KIMBALL.

PART TENTH.

DISTRIBUTION OF FARM PRODUCTS IN CITY MARKETS.

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1. CINCINNATI AS A FARM MARKET.[1]

No city better illustrates the relation of a central market to widely separated producers and consumers than Cincinnati. Situated on the Ohio River, its distributive services include the moving of surplus grain from the adjacent States north of the river to those on the south; it receives in turn large quantities of fruits and vegetables from the South and distributes them throughout the North, and through this market vast quantities of poultry and eggs are received for shipment to the Eastern markets. These are its main features as a distributive market; as a consuming center it has special features which herewith are described.

(1) *Marketing farm produce by wagon.*—Within a radius of about 25 miles of Cincinnati, in Ohio and Kentucky, country hucksters buy from farmers, and farmers themselves haul considerable produce to this market. The principal articles of farm produce marketed in this way are garden vegetables of all kinds, eggs, poultry, and butter, and hay to a small extent. These wagons supply many customers in a house to house canvass and their surplus they sell to retail grocers or to commission houses. Most commission houses will buy butter, eggs, or poultry at a price, or sell on commission, at the option of the consignor. So far as butter, eggs, and poultry are concerned, this wagon feature is quite important and the regular wholesale dealers feel this competition keenly.

(2) *Fruit auctions at Cincinnati.*—A few fruit commission houses have formed a fruit-auction company. Sales of lemons, oranges, and pineapples are made through this channel to an important extent. The plan of operation is this: Each firm belonging to the fruit-auction company sends all consigned fruit to them to be sold on commission to the fruit auction. The sales are advertised to take place at a certain time. Samples of fruit are displayed and sales are made to the highest bidder. In this manner it is easy to keep the supplies from becoming burdensome, and all members of the fruit-auction company are in position to know how receipts and demand are running. There are two of these fruit auctions in operation.

(3) *Track market and pools.*—One of the railroads entering the city has given particular attention to the accommodation of receivers of potatoes, onions, cabbage, watermelons, and apples. This railroad has given this class of trade track room for about 100 cars. There is every facility for handling this class of produce direct from the car to the wagon. Buyers examine goods and make purchases in this railroad yard, and this is known as the "track market." The railroad allows receivers 4 days to sell the contents of a car; after that time demurrage is charged.

A number of these receivers have formed themselves into a pool for the economical handling of this business. There are about 3 or 4 such "pools" and a large number of independent dealers, so that the business is not "controlled" to an extent that permits any pool or individual to make the market.

The advantage of being a member of one of these pools is that fewer salesmen are required to handle the goods. The amount of stock en route is reported to a manager, the books are kept separately, and the profits divided 2 or 3 times a year.

When advices to the manager of the pool indicate too heavy receipts the members are requested to advise their shippers to stop shipping for fear of an oversupply, and when the movement is light and the demand good the members are urged to encourage shipments.

An economy in handling produce through the medium of this track market is the saving of hauling from the depot to the stores. City peddlers and grocers buy right out of the car, making only one hauling of the goods from track to consumer.

(4) *Cold storage in Cincinnati.*—The writer has been unable to obtain full information in regard to cold-storage facilities in Cincinnati, but begs to submit the following:

There are three cold-storage plants in operation here, one located in the city and two in Covington, Ky., immediately on the opposite bank of the Ohio River. In addition to these, a large cold-storage plant in Indianapolis has secured a share of the Cincinnati trade. The Cincinnati cold-storage plant has a capacity of 900,000 cubic feet. There are ample facilities for storing all of the produce our merchants wish to carry through the warm season.

The cold-storage plants have avoided the question of their rates of charges for storing, but these rates are variable, according to contract for space and the articles to be stored and the guaranteed temperatures. As to the influence of storage stocks upon prices, it appears that during the season of heaviest production of such articles as apples, onions, pears, eggs, and poultry the demand from dealers who wish to store and carry such products for the winter demand has a tendency to advance prices. This source of demand during the time of heaviest supply is important and influences a steady condition of the market by relieving sellers of the surplus which will not go into immediate consumption. During the winter these cold-storage stocks are put upon the market and come in competition with the naturally light supplies during the months of least production, and by increasing the total supplies have the effect of depreciating values. In order to get an idea of the extent of the influence of cold-storage stocks and cold-storage speculation upon prices, the following estimates are presented:

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[1] Reported by Mr. Joseph D. Morten, special agent, Cincinnati, Ohio.

The summer price of eggs in this market is raised from about 5 to 7 cents per dozen to 8 to 10 cents per dozen; the winter price is reduced from 25 to 30 cents per dozen to 15 to 18 cents per dozen. The summer price of small chickens is raised from 6 to 7 cents per pound to 8 to 9 cents per pound, and the winter price is reduced from about 11 to 13 cents per pound to 9 to 10 cents per pound. It is not practicable to offer estimates on other articles, as fruits and vegetables are so variable as to quality and production that the range in prices would be so wide in different seasons that an exhaustive study and tabulation would be necessary to arrive at even approximate figures. The percentage of depreciation in quality in handling farm products through cold storage is in the aggregate small, as such facilities have been brought by experience to a high degree of efficiency, and cold-storage men, as well as dealers, have ascertained by experiment the exact degrees of temperature necessary for the preservation of the different articles to be stored, and cold-storage managers have been able to regulate temperatures to the required degree necessary for the preservation of the different articles of produce. Complaints of serious depreciation in quality upon investigation usually result in finding that the produce was not in a proper condition for storage when it was accepted by the storage plants, but the actual waste or loss in supplies through the medium of unsuccessful cold storage is rather small, and the constantly increasing demand for cold-storage facilities is evidence of the successful preservation of produce through the agency of cold storage.

(5) *Handling of hay at Cincinnati.*—The great bulk of the hay received in this market is handled in the following manner: The first receiver is usually a commission merchant or a dealer who buys at a price from a country shipper. Samples of hay are taken from the cars by an inspector and the grade of the hay established. The sample is displayed on the chamber of commerce floor as representing a car of hay for sale. The buyers of the hay are of 3 classes, viz, the local feed-store buyer, the warehouseman or large dealer, and the buyer for reshipment.

The elements affecting price, assuming that No. 1 timothy is the quality, are (*a*) the price which buyers for reshipment will pay, (*b*) the price local feed stores pay, (*c*) the warehouseman or large dealer's price.

The bids of these 3 sources of distribution are the elements which establish the market prices. This is a perfectly natural competition, and there is no agreement, combination, or understanding of any description calculated to unduly affect rates of this product. Buyers for reshipment always have a bid, which prevents prices from dropping to a relatively lower point than other markets offer.

(6) *Statistical results—expenses of distribution.*—The following results show what the prices and expenses of marketing representative farm products are at Cincinnati:

Prices and expenses of distribution in Cincinnati.

Year and month of sale.	Kind and grade of product.	Consumer paid—	Producer received—	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributor's.	Percentage of consumer's price to producer's.	Remarks.
May 14, 1900	Dairy butter	13½ cents per pound	11 cents per pound	2½ cents per pound	18.5	81.5	Goes to packers for reworking, etc.
Jan. 14, 1900	.....do	18½ cents per pound	16 cents per pound	.....do	13.5	86.5	Do.
May 15, 1900	Sweet milk	6 cents per quart	1.65 cents per quart	4.35 cents per quart	72.5	27.5	Aerated sold mostly.
Jan. 15, 1900	.....do	.....do	2.73 cents per quart	3.27 cents per quart	54.5	45.5	Pasteurized sold at 10 cents per gallon more.
Nov. 15, 1899	Apples	$3 per barrel	$2.12 per barrel	88 cents per barrel	29.3	70.7	New York stock.
Dec. 1, 1899	.....do	$2.50 per barrel	$1.67½ per barrel	82½ cents per barrel	33	67	Ohio stock.
May 18, 1900	No. 2 red winter wheat	73 cents per bushel	67½ cents per bushel	5½ cents per bushel	7.5	92.5	End of crop movement.
Aug. 1, 1899	.....do	69 cents per bushel	63½ cents per bushel	.....do	8	92	Beginning of new-crop movement.
May 14, 1900	Chickens	11 cents per pound	6 cents per pound	5 cents per pound	45.4	54.6	Marketed live, sold to consumer dressed.
Aug. 22, 1899	.....do	10 cents per pound	5 cents per pound	.....do	50	50	Do.
Nov. 28, 1899	Turkeys	10½ cents per pound	6 cents per pound	4½ cents per pound	42.9	57.1	Do.
Mar. 8, 1900	.....do	11½ cents per pound	7 cents per pound	.....do	39.1	60.9	Do.
May 1, 1900	Eggs	12 cents per dozen	8½ cents per dozen	3½ cents per dozen	29.2	70.8	Time of heavy movement.
Jan. 18, 1900	.....do	19 cents per dozen	13 cents per dozen	6 cents per dozen	31.6	68.4	Retailers increase their profits when eggs are scarce.
Oct. 23, 1899	Potatoes	60 cents per bushel	18 cents per bushel	42 cents per bushel	70	30	Northern stock.
Jan. 8, 1900	.....do	80 cents per bushel	37 cents per bushel	43 cents per bushel	53.8	46	Do.
May 14, 1900	Cabbage	10 cents per head	4½ cents per head	5½ cents per head	52.5	47.5	Southern cabbage.
Oct. 15, 1899	.....do	5 cents per head	2 cents per head	3 cents per head	60	40	Northern cabbage; cost of package not included.
June 26, 1899	Watermelons	30 cents each	10 cents each	20 cents each	66.6	33.3	Southern melons.
Aug. 21, 1899	.....do	25 cents each	9 cents each	16 cents each	64	36	Indiana melons.
May 14, 1900	Strawberries	10 cents per quart	6¼ cents per quart	3¾ cents per quart	37.5	62.5	Southern berries.
June 2, 1899	.....do	8 cents per quart	5½ cents per quart	2½ cents per quart	33.3	66.7	Home-grown berries; cost of package not included.
Sept., 1899	No. 1 timothy hay	$12 per ton, average price for the month.	$7.25 per ton	$4.75 per ton	39.6	60.4	Month of heaviest movement.
Sept., 1899 Month of heaviest movement.	.....do Trading grade.	Average price $12 per ton during September, 1899.	.....do	.....do	39.6	60.4	

Hay tributary to Cincinnati mainly comes from Ohio and Indiana within a radius of 150 miles. Freight rate averages 8 cents per 100 pounds, or $1.60 per ton. An occasional shipment came from Illinois on a 12-cent freight rate, or $2.40 per ton, but such an exhibit is not representative. Inquiry establishes the example given as a fair average.[1]

This expense is apportioned as follows: Country shipper who buys from farmer and makes up carloads, 50 cents per ton; freight rate, $1.60 per ton; commission 50 cents, weighing 10 cents, inspection 5 cents, 65 cents per ton; retailer's profit, $2; total, $4.75. Cost of baling is $1.25 to $1.50 per ton, which is not included in distribution expense.

(7) *Commission charges, etc., at Cincinnati.*

Number of produce commission houses, about	100
Number of hay and grain commission houses, about	30
Number of wholesale dealers, hay and grain, about	75
Number of retail stores dealing in farm products, 1899	1,061
Number of peddlers of farm products licensed, 1899	573
Number of market stands for street markets, 1899	816

RATES OF COMMISSION.

Butter	per cent	5
Oranges:		
Florida	do	7-10
California	do	5-7
Apples	do	7-10
Onions	do	7-10
(Bulk 3 cents bushel and 10 per cent.)		
Poultry (live)	do	5
Poultry (dressed)	do	5
Eggs	do	5
Potatoes	cents per bushel	3
Cabbage ($15 per car)	per cent	10
Watermelons ($15 per car)	do	10
Strawberries	do	7-10
Hay	cents per ton	50
Corn	cent per bushel	1
Oats	do	½

Live-stock charges at Cincinnati.—The following rates of commission have been charged on all stock bought and sold on and after April 1, 1899:

For selling.—Cattle sold in car lots, whether wholesale or retail, 70 cents per head, not to exceed $18 per car; cattle driven in, 70 cents per head; fresh cows with calves by their side, 70 cents for cow and 25 cents for calf; veal calves, 25 cents per head. Hogs, 4 cents per 100 pounds to 15,000 pounds for a single and 30,000 pounds for a double-deck car; hogs driven in, lots of 5 head and under, 20 cents per head. Lots of 5 to 10 head, $1 per lot; any number over 10 head, 10 cents per head; wagon hogs, same as lots driven in. Sheep and lambs, whether shipped or driven in, when in lots of 25 head or under, 8 cents per head; in lots of 25 to 40 head, $2 per lot; any lot over 40 head, 5 cents per head as to all. Mixed loads: Hogs, 4 cents per 100 pounds to 15,000 pounds for single-deck and 30,000 pounds for double-deck loads. Cattle, 70 cents per head, not, however, to exceed $18 as to charges for cattle in such car. Sheep and lambs, 5 cents per head. Veal calves, 25 cents per head.

Yardage.—The yardage charged for live stock is as follows: Cattle, 20 cents per head; hogs, 7 cents per head, not to exceed $8 per car for single decks; calves, 10 cents per head; sheep and lambs, 5 cents per head.

(8) *Shipping points and rates to Cincinnati.*—The list below gives the territory within which Cincinnati may be said to get the major portion of the receipts of the

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[1] The compiler of this report regards the present methods employed for the distribution of hay in this market as economical and the service as reasonably low in cost as is consistent with efficiency. This detail is given because Cincinnati is an important market for hay.

products handled in that market, showing two main shipping points in different directions which roughly fix the limits:

Product.	From—	River or railroad.	Freight rate.
Butter	Ripley, Ohio	River	20 cents per 100 pounds.
Do	Dillsboro, Ind	Baltimore and Ohio R. R	
Oranges	Los Angeles, Cal	Southern Pacific and Santa Fe.	$1.25 per 100 pounds
Do	Tampa, Fla	Queen and Crescent and Louisville and Nashville R. R.	
Apples	Rochester, N. Y	Cleveland, Cincinnati, Chicago and St. Louis or Cincinnati, Hamilton and Dayton.	27 cents per 100 pounds.
Do	Gallipolis, Ohio	River	18 cents per 100 pounds.
Onions	Painesville, Ohio	Cincinnati, Hamilton and Dayton R. R.	
Do	McGuffie, Ohio	do	
Poultry	Riverton, Ky	Chesapeake and Ohio R. R	36 cents per 100 pounds.
Do	Vevay, Ind	River	15 cents per 100 pounds.
Eggs	Wrightsville, Ohio	do	10 cents per 100 pounds.
Do	Harrodsburg, Ky	Cincinnati Southern	50 cents express, 30 cents freight.
Potatoes	Chippewa Falls, Wis	Cincinnati, Hamilton and Dayton R. R.	
Do	Minneapolis, Minn	do	
Cabbage	Adams Basin, N. Y	do	
Do	Saginaw, Mich	do	
Watermelons	Quitman, Ga	Louisville and Nashville R. R	
Do	Washington, Ind	Baltimore and Ohio Southwestern R. R.	
Strawberries	Chattanooga, Tenn	Express, Queen and Crescent	$1 per 100 pounds.
Do	San Antonio, Fla	Express, Queen and Crescent and Louisville and Nashville.	
Hay	Lebanon, Ind	Cleveland, Cincinnati, Chicago and St. Louis R. R.	11½ cents per 100 pounds.
Do	Rushville, Ind	Cincinnati, Hamilton and Dayton R. R.	9 cents per 100 pounds.
Wheat	Greensburg, Ind	Cleveland, Cincinnati, Chicago and St. Louis R. R.	6 cents per 100 pounds.
Do	Indianapolis, Ind	Cleveland, Cincinnati, Chicago and St. Louis and Cincinnati, Hamilton and Dayton R. R.	Do.
Corn	Chrisman, Ill	Cleveland, Cincinnati, Chicago and St. Louis or Cincinnati, Hamilton and Dayton R. R.	8 cents per 100 pounds.
Do	Owaneco, Ill	Baltimore and Ohio Southwestern R. R.	9 cents per 100 pounds.
Oats	Kankakee, Ill	Cleveland, Cincinnati, Chicago and St. Louis R. R.	Do.
Do	Ridge Farm, Ill	do	8 cents per 100 pounds.
Milk	Hills Station, Ohio	Baltimore and Ohio Southwestern R. R.	2 cents per gallon.
Do	Loveland, Ohio	do	Do.

2. ST. LOUIS AS A PRODUCE MARKET.[1]

Statistical results, covering the prices and expenses of distribution in St. Louis, are given below for eggs, oranges, potatoes, strawberries, and watermelons.

(1) *The egg trade of St. Louis.*—The volume of trade in eggs at St. Louis is very large. It may be measured by the figures of receipts and shipments of packages for a series of years.

Receipts and shipments of eggs at St. Louis.

Year.	Receipts.	Shipments.	Year.	Receipts.	Shipments.
	Packages.	*Packages.*		*Packages.*	*Packages.*
1899	751,224	511,426	1894	598,773	317,221
1898	898,984	549,146	1893	562,359	292,168
1897	894,906	560,832	1892	469,216	174,041
1896	796,490	491,838	1891	501,313	271,714
1895	654,938	413,015			

The most noteworthy feature of this movement is the constancy of the difference between receipts and shipments, representing local consumption. The February price is taken for eggs, because in December the price rises as high as 12½ cents and in August goes as low as 7½ cents per dozen.

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[1] Data furnished by Mr. E. S. Tompkins, special agent, St. Louis.

Prices and expenses of distribution of eggs in St. Louis.

Year and month of sale.	Consumer paid per dozen.	Producer received per dozen.	Combined expenses of distribution, per dozen, between producer and consumer.	Percentage of consumer's price to distributor's.	Percentage of consumer's price to producer's.	From St. Louis.
	Cents.	*Cents.*		*Per cent.*	*Per cent.*	*Miles.*
Feb., 1900	[1]10	9	2¼ per cent commission for selling; 0.0075 cent per dozen freight from Sedalia, Mo.[2] Total, 1 cent	10	90	188
	10	8.55	2¼ per cent commission for selling; 0.012 cent per dozen freight from Humboldt, Kans. Total, 0.0145 cent.	14	86	422
	10	8.45	2¼ per cent commission for selling; 0.013 cent per dozen freight from Bald Knob, Ark. Total, 0.0155 cent.	15	85	288

[1] Retail price at an average of 12½ cents per dozen.
[2] Cases are returned to shipper or paid for by the buyer.

(2) *The orange market in St. Louis.*—In the statement covering oranges the January price alone is given. California stock was all there was on this market this year, as the Florida crop was not heavy enough to meet the California stock in market. The record at two different prices is given, as there was a very uniform market in this month, which continued through February and March at about the same level. As the weather grows warmer the prices advance, but the advance will simply be the cost of icing the stock in transit. The freight charges are the same from all orange territory, and Los Angeles is taken as the point of origin.

Prices and expenses of distribution of oranges (navels) in St. Louis.[1]

Year and month of sale.	Consumer paid per case.[2]	Producer received per case.	Combined expenses of distribution per case between producer and consumer.	Percentage of consumers' price to distributers.	Percentage of consumer's price to producers.	From St. Louis.
				Per cent.	*Per cent.*	*Miles.*
Jan., 1900	$2.65	$1.50	25 cents per case profit for wholesaler; $1.25 per 100 pounds in carloads of 24,000 pounds from Los Angeles, Cal. Total, profit 25 cents; freight 90 cents $1.15.	44	56	2,084
	3.00	1.85	do	38	62	2,084

[1] Brokers in Los Angeles get about $10 per car for selling.
[2] Each case weighs 72 pounds and contains about 175 oranges.

(3) *Expenses of marketing potatoes.*—In the statement covering potatoes the straight grade is next to fancy goods and is the standard. It means good potatoes of fair size, all of one variety, and can be sold for eating or seed. The wholesaler, it is ascertained, gets his profit from selling to the larger consumers or hucksters at an advance of about 10 cents per bushel over what they cost him in car lots.

Prices and expenses of distribution of potatoes (not mixed), St. Louis.

Year and month of sale.	Consumer paid per bushel.[1]	Producer received per bushel.	Combined expenses of distribution per bushel between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.	From St. Louis.
	Cents.	*Cents.*		*Per cent.*	*Per cent.*	*Miles.*
June, 1899	60	39	21 cents freight from San Antonio, Tex.	35	65	980
	60	48	12 cents freight from Hope, Ark	20	80	457
Nov., 1899	38	27.2	10.8 cents freight from Prescott, Wis	29	71	564
	38	28.1	9.9 cents freight from Stark, Iowa	26	74	322

[1] Hotel or peddler pays 70 cents per bushel, profit to dealer, 10 cents per bushel.

(4) *Expenses of marketing strawberries.*—In the statement covering strawberries it is to be noted that these berries are on this market the year round, but they are not found in the open market in large quantities until June, when they are sold by the commission merchant at $1.25 per case, but soon get to $1 per case. They run from 500 to 600 crates to the car. A fair average price is $1.10. In southwestern Missouri and northern Arkansas they are raised in large quantities, and in season are shipped in carload lots, and the figures are based on that product. The berries from Southern points are handled mostly by express, and prices fluctuate so much that it is impossible to determine what the normal situation is. The shipments, however, are small compared with the Arkansas and Missouri berries.

Prices and expenses of distribution of strawberries in St. Louis.

Year and month of sale.	Consumer paid per crate.	Producer received per crate.	Combined expenses of distribution per crate between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.	From St. Louis.
		Cents.		*Per cent.*	*Per cent.*	*Miles.*
June, 1899	$1.10	80.2	10 per cent commission for selling; 47 cents per 100 pounds from Rogers, Ark., in carloads of 20,000 pounds. Total, commission 11 cents; freight 18.8 cents—29.8 cents.	27	73	283
	1.10	83	10 per cent commission for selling; 40 cents per 100 pounds from Springfield, Mo., in carloads of 20,000 pounds. Total, commission 11 cents; freight 16 cents—27 cents.	25	75	238

(5) *Expenses of marketing watermelons.*—In the statement covering watermelons it is to be noted that Texas melons arrive early in August and the Missouri melons late in August and early in September. The prices named are for early receipts, when they first begin to move freely. The producers continue to send them as long as they will pay the freight charges. The car-lot dealer does not make the profit the figures show, for he loses the broken and rotten melons, which average from 10 to 25 per cent.

Prices and expenses of distribution of watermelons in St. Louis.

Year and month of sale.	Consumer paid per car.	Producer received per car.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.	From St. Louis
				Per cent.	*Per cent.*	*Miles.*
Aug., 1899	[1] $100.00	$20.00	32 cents per 100 pounds freight from San Antonio, Tex., 25,000 pounds to car, 1,000 melons, $80 freight.	80	20	930
	[2] 75.00	36.60	16 cents per 100 pounds freight from Lebanon, Mo., 24,000 pounds per car of 1,000 melons, $38.40 freight.	51	49	182

[1] Car-lot buyer jobs them to retailer at $1.80 per dozen, or 15 cents each. Retailer sells them from 20 to 25 cents each.

[2] Car-lot buyer jobs them to retailer at $1.40 per dozen. Retailer sells them from 15 to 20 cents each.

3. THE DENVER MARKET FOR FARM PRODUCTS.[1]

Kansas and Nebraska, to a great extent, control the markets of Colorado as to butter, eggs, and poultry, and to some extent the prices of meats. Meat prices in Denver, for instance, are affected by the demand of Nebraska and Kansas farmers for cattle for winter feeding on their farms. This demand affects with the Omaha, St. Joseph, and Kansas City packing interests. The Colorado producer therefore has the advantage of a three-cornered demand for his stock.

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[1] Reported by Mr. W. G. M. Stone, special agent, Denver, Colo.

Consequently the home consumer is required to pay the price which is fixed by conditions governing not only far outside of his own locality, but beyond his own State.

The report below gives a fair idea of the relation of production to consumption of farm products in Colorado.

(1) *General character of the Denver market.*—For her own use Colorado produces enough of some things, while of others she does not. The State grows more than double the wheat consumed. The hay is sufficient and rapidly increasing to meet the requirements of the special stock-feeding industry; the alfalfa crop alone is estimated at 1,500,000 tons for 1899. Vegetables of all kinds are plentiful and of fine quality. The melon crop for 1899 gave a surplus of several hundred carloads. Colorado potatoes, like her melons, are famous wherever known; for size, shape, and quality they are unexcelled and the yield is enormous. The Field and Farm estimates the last crop at 20,000 carloads. Of all ordinary fruits an abundance is grown, including apples, pears, peaches, plums, cherries, strawberries, raspberries, gooseberries, and currants; the local demand antedates the season of most of them by large invoices of Southern fruits; this locality ships many local fruits in their season. While cattle are vastly in excess of the demand for beef, yet at least half the meat is brought from Omaha and Kansas City in competition with the slaughterhouses of Denver.

In eggs, poultry, and butter, Colorado is deficient. In 1899 this market required 10,500,000 dozen eggs, of which it produced less than 5 per cent. There were also consumed 7,000,000 pounds of poultry, of which not to exceed 3 per cent was produced at home. Of butter 12,000,000 pounds are used a year, half of which is imported; the importation included 1,123,537 pounds of oleomargarine.

(2) *Systems of distribution.*—Vegetables for the Denver market are produced mostly by Italians and brought to the city market. Every gardener has his stall. They sell only at wholesale. Anyone may buy by taking at the quantity price, which enables the hotels and boarding houses to buy at best prices. The sales are mostly to jobbers, grocers, and peddlers, of whom the consumer buys. Fruits pass from the orchard through the same channel. Butter finds many private special patrons at a fixed price the year round. Milk hitherto has been supplied, under a city milk-inspection law, from country dairies adjacent to the town. Every dairyman acts for himself. There is a movement on foot to centralize the business and eliminate expense. A number of dairymen have been arrested within a week for using "freezene."

(3) *Cold storage in the produce trade.*—Cold storage is an important factor and materially affects our markets. For example, favorite and fancy fruits are held in large quantities beyond their season, especially of grapes, pears, and apples. Meats, of course, are under its influence everywhere, but in Colorado the egg and poultry are under its supreme control. We depend on Kansas and Nebraska for more than 95 per cent of our supply. Fowls in their season are packed and frozen in barrels by carloads to supply this market, and heavy stocks are drawn upon as needed for this market. The same is true of eggs, the only difference being that the poultry is frozen and kept so, while the eggs are put and held at about 28°. These products are brought in refrigerator cars and on arrival put into cold storage till sold the consumer. The best grocers are all prepared to care for a reasonable supply. Cold storage operates in the interest of all—both rich and poor, distributer and consumer.

(4.) *Statistical results for various crops.*—The statistical results for the Denver inquiry are recorded below for milk, eggs, potatoes, onions, cabbage, strawberries, cantaloupes, wheat, oats, and hay.

Prices and expenses of distribution in Denver, Colo.

Year and month of sale.	Kind and grade of product.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.
					Per cent.	*Per cent.*
Yearly average	Dairy milk, city use	6 cents per quart	3.5 cents per quart	2.5 cents per quart	41⅔	58⅓
July 1, 1899, butter fat 18 cents.	Creamery milk reduced to butter from 100 pounds milk.[1]	25 cents per pound, $1.15	[2] 92 cents	23 cents	20	80
Jan. 1, 1900, butter fat 25 cents.		30 cents per pound, $1.38	[2] $1.20	18 cents	13	87
May 1, 1900, butter fat 18 cents.		25 cents per pound, $1.15	[2] 92 cents	23 cents	20	80
July 1, 1899	Eggs	Average 22.5 cents per dozen	11.5 cents	11 cents	48¾	51¼
Jan. 1, 1900	do	25 cents per dozen	16.5 cents	8.5 cents	34	66
May 1, 1900	do	20 cents per dozen	12.5 cents	7.5 cents	37½	62½
Nov. 1, 1899	Greeley potatoes	$1 per 100 pounds (60 cents bushel).	50 cents per 100 pounds (30 cents bushel).	50 cents per 100 pounds; of this the railroads get 12 cents.	50	50
Apr. 1, 1900	do	$1.25 per 100 pounds (75 cents bushel).	70 cents per 100 pounds (42 cents bushel).	55 cents per 100 pounds; railways get 12 cents.	44	56
Nov. 1, 1899	Onions	$1.50 per 100 pounds	60 cents per 100 pounds	90 cents per 100 pounds; of this railways receive 15 cents.	60	40
Dec. 1, 1899	Cabbage	$2 per 100 pounds	$1 per 100 pounds	$1 per 100 pounds; railways get 12 cents.	50	50
Season average	Strawberries	$2 per crate (24 boxes)	$1.25	75 cents	37½	62½
July 1, 1899	Oats	$1.20 per 100 pounds	80 cents per 100 pounds	40 cents	33⅓	66⅔
Jan. 1, 1900		$1.10 per 100 pounds	85 cents per 100 pounds	25 cents	23	77
May 1, 1900		$1.15 per 100 pounds	85 cents per 100 pounds	30 cents	26	74
Sept. 1, 1899	Alfalfa hay	$5 per ton	$4 per ton	$1	20	80
Jan. 1, 1900		$5 per ton	$4 per ton	$1	20	80
May 1, 1900		$10 per ton	$7.50 per ton	$2.50	25	75
July 1, 1899	Wheat	$1.70 per 100 pounds	95 cents per 100 pounds	75 cents	44	56
Season of 1899	Rocky Ford cantaloupes	$2.50 per crate	Average of 60 cents per crate.	$1.90	76	24

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[1] On the basis of 4 pounds of butter fat to 100 pounds of milk and 4 pounds fat to 4.6 pounds of butter.

[2] This includes to the farmer a return of the skim milk, at a valuation of 20 cents per 100 pounds, and apparently lessens the profit to the creamery and the dealer. It does not present the question of butter so much as that of the value of milk.

These Rocky Ford cantaloupes are shipped in crates containing an average of 45 melons. Average weight is 67 pounds per crate; average crates per carload, 360. Retail price of $2.50 per crate is obtained from the leading first-class grocers of the city. Many cantaloupes are sold by street peddlers and cheap grocers at less prices, especially goods that need pushing or which are of inferior merit.

The freight to Denver is 19 cents per hundredweight, or about 12¾ cents per crate; to Kansas City, 35 cents per hundredweight; to St. Louis, 41 cents per hundredweight, and to New York, 66 cents per hundredweight.

It is estimated that the coming beet-sugar industry at Rocky Ford will reduce the acreage of cantaloupes about one-fourth to one-third from last year in that locality, but will increase it at some other points.

The above data have been carefully collected from reliable sources at Rocky Ford.

4. MARKETS FOR FARM PRODUCE IN CLEVELAND, OHIO.[1]

(1) *Methods of handling leading products.*—The bulk of the different products involved in this inquiry, excepting milk and oranges, passes through three hands on their way from the producer to the consumer. The grower sells to the country merchant or to a buyer who makes it his business to go through the country and buy up certain lines of goods concerning whose markets he has made special study. From the country merchant or buyer the products go to the wholesale dealer or commission men; these in turn sell to the retail dealer, out of whose hands the goods pass finally to the consumer.

Together with the profit of each of these intermediate agents, of course, is coupled the cost of transportation and of the increased handling attendant upon so many changes of ownership, all of which increase the cost to the consumer.

This method is true of the bulk of the goods, but of course there is a large amount of it which passes directly from producer to consumer by reason of the proximity of many producers to the market. The producer in this case saves to himself all the profits of the intermediate distributers, but in turn is compelled to use his time and vehicles to get his produce to the place of sale.

Another plan which is obtaining among the larger commission houses now does away with the country merchant and the professional buyer by means of an agent sent out direct from the house to do all of its buying. This method eliminates one of the factors in the first plan of distribution, but does not decrease the cost to the consumer to any appreciable extent, because the salary of this buyer steps in to take the place of the profits reaped by the country merchant, and if anything is left over instead of being a saving to the consumer it becomes an increased profit to the commission house.

A large proportion of the milk supply goes directly from producer to consumer, and the remainder of it passes through the hands of but one intermediate agent, viz, the milk dealer.

Oranges are handled almost entirely by associations of growers, who attend to making their initial sales themselves, and thus do away with one of the three agents involved in the general method of distribution as first described.

(2) *Statistics of trade establishments.*—Commission houses, 74; wholesale dealers, 96; retail stores, 1,071; public market houses, 3; private market houses, 1; hay markets, 1.

There are no other provisions for bringing producer and consumer together except the privilege of stands on the street curb and peddling around the streets.

Just at present no license fee is charged for peddling farm products around the streets. A fee of $10 a year for gardeners and $35 a year for hucksters is charged for curb space close to the market houses, however. There is pending in the city council now an ordinance to make all hucksters and gardeners who peddle around the streets pay a yearly license fee of $25. If passed at the next meeting of the council this measure will go into effect in about 12 days. During 1899 there were 418 curb licenses issued.

(3) *Rates of commission charged by commission merchants:*

	Per cent.
Butter	5
Eggs	5
Cheese	5
Poultry	5
Cabbage	10
Apples	7-10
Onions	7-10

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[1] Prepared by Mr. S. A. Roach, special agent, Cleveland, Ohio.

	Per cent.
Potatoes	[1] 10
Watermelons	[2] 7-10
Strawberries	7-10
Oranges	10

	Cents.
Hay (per ton)	50
Corn (per bushel)	1
Oats (per bushel)	1
Milk, not handled on commission.	

The trade in butter, eggs, cheese, and poultry is gradually turning to a buying and selling basis. Potatoes and onions are almost entirely so handled.

There are no associations of farmers acting as their own commission agencies here at present. The scheme was tried several years ago, but failed from the fact that among their number the farmers had no men sufficiently skilled in such transactions, even if they had the time, to compete profitably with long-established commission houses.

(4) *Representative shipping points in productive areas.*

Milk: Willoughby, Ohio, via suburban electric line; Garrettsville, Ohio, via Erie R. R.

Butter: Mount Gilead, Ohio, via Big Four R. R.; Chicago, Ill. (gathered up from Illinois, Wisconsin, Minnesota, etc.), via Lake Shore and Michigan Southern R. R.

Cheese: Alliance and Laings, Ohio, Cleveland and Pittsburg R. R.; Meadville, Pa., via Erie R. R.

Eggs: Shelby, Ohio, via Big Four R. R.; Chicago, Ill. (gathered from Missouri, Iowa, Illinois, etc.), via Lake Shore and Michigan Southern R. R.

Poultry: Crestline, Ohio, via Big Four R. R.; Louisville, Ky., via Big Four R. R.; St. Louis, Mo. (gathered up from surrounding States of Missouri, Iowa, Illinois), via Big Four.

Oranges: Riverside, Cal., via Union Pacific to Chicago, then New York, Chicago and St. Louis; Citra, Fla., via Southern R. R., to Cincinnati, then Big Four route.

Apples: Western New York via New York, Chicago and St. Louis, also Lake Shore and Michigan Southern; St. Louis, Mo., via Big Four.

Onions: (Early) New Orleans; (later) Alger, Ohio, and Orange County, via Lake Shore and Michigan Southern—New York.

Cabbages: (Early) St. Louis, Mo., via Big Four; (later) Louisville, Ky., via Louisville and Nashville R. R. and Big Four; Dayton, Ohio, via Big Four.

Potatoes: (June) Arkansas and Indian Territory; (later) Harbor Beach, Mich., via Michigan Central; Ceres, N. Y., via New York, Chicago and St. Louis or Lake Shore and Michigan Southern.

Watermelons: Georgia, via Southern R. R. and Big Four; Indiana, via Big Four.

Strawberries: (Early) Chattanooga, Tenn., via Southern R. R.; Florida, via Southern R. R.; (later) Ohio.

Hay: Fremont, Ohio, via Lake Shore and Michigan Southern; Kankakee district, Indiana, Iowa; Greenwich, Ohio, via Big Four and Baltimore and Ohio.

Corn: Bloomington, Ill., Champaign, Ill., via Big Four and Lake Shore and Michigan Southern.

Oats: Bloomington, Ill., Saybrook, Ill., via Big Four and Lake Erie and Western.

(5) *Competition between Farmers and Dealers.*—Competition between farmers supplying the city of Cleveland directly and dealers who get their farm products from more distant sources is not very close except on milk, butter, eggs and poultry, and strawberries in season.

In good weather the above-named products are hauled by wagon from 40 miles away as the extreme, 20 miles as an average.

(6) *Rates of transportation from distant points.*

Potatoes: From Michigan, $60 per car.

Watermelons: From Georgia, $125 to $200 per car; from Indiana, $40.

Strawberries: From Chattanooga: $160 per car.

Oranges: California, $1.25 per box; Florida, 58 to 98 cents per box.

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[1] Basis sometimes. Usually sold on a 4 and 5 cents per bushel basis.

[2] When sold on commission. Usually bought and sold outright.

Cabbage: St. Louis, $90 per car; Louisville, Ky., $50; Dayton, Ohio, $35.
Apples: New York State (western part), $45 to $50 per car.
Onions: New Orleans, $100 per car. Ohio onions are practically at our door.
Eggs: Ohio towns, 20 cents per crate; Chicago, $60 per car.
Butter: Elgin, Ill., 69 cents per 100 pounds; Ohio towns, 20 cents.
Cheese: Aurora, Ohio, 12 cents per 100 pounds; Meadville, Pa., 19 cents; New York State, 25 cents.

(7) *Statistical Results for Cleveland.*—Fifteen articles are reported on in the tables below. In each case prices at two periods of the year have been taken—winter and summer or spring and fall. The better grades of articles have been selected because they represent the bulk of the sales in cities such as Cleveland, surrounded by a superior rural life, and at the same time within the reach, by lake and rail, of the best markets east and west.

Prices and expenses of distribution in Cleveland.

Year and month of sale.	Kind and grade of product.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.	Remarks.
					Per cent.	*Per cent.*	
July, 1899	Sweet milk	5 cents per quart	2¼ cents per quart	2¾ cents	55	45	
Jan., 1900	....do	6 cents per quart	3¼ cents per quart	....do	45.8	54.2	
Nov., 1899	Elgin butter	29 cents per pound	20 cents per pound	9 cents per pound	31	69	
June, 1900	....do	26 cents per pound	17 cents per pound	....do	34.6	65.4	
May, 1900	Ohio creamery butter	22 cents per pound	15 cents per pound	7 cents per pound	31.8	68.2	
Oct., 1899	....do	26 cents per pound	19½ cents per pound	6½ cents per pound	25	75	
May, 1900	Dairy butter	20 cents per pound	14 cents per pound	6 cents per pound	30	70	
Oct., 1899	....do	22 cents per pound	16 cents per pound	....do	27.3	72.07	
Do	Cheese (Limburger)	15 cents per pound	9 cents per pound	....do	40	60	
May, 1900	....do	....do	....do	....do	40	60	
Oct., 1899	Cheese (Schweitzer)	16 cents per pound	9½ cents per pound	6½ cents per pound	40.6	59.4	
May, 1900	....do	18 cents per pound	11 cents per pound	7 cents per pound	38.8	61.2	
Oct., 1899	Cheese (New York State)	16 cents per pound	9½ and 10 cents per pound	6½ cents per pound	40.6	59.4	
May, 1900	....do	....do	....do	....do	40.6	59.4	
Oct., 1899	Oni ns (Ohio)	65 cents per bushel	45 cents per bushel	20 cents per bushel	30.8	69.2	
Mar., 1900	....do	60 cents per bushel	40 cents per bushel	....do	33⅓	66⅔	
Sept., 1899	Potatoes (Ohio)	70 cents per bushel	45 cents per bushel	25 cents per bushel	36	64	
Jan., 1900	Potatoes (Michigan)	75 cents per bushel	25 cents per bushel	50 cents per bushel	66⅔	33⅓	
July, 1899	Oranges (fine)	40–50 cents per dozen	8½ cents per dozen	31½–41½ cents	78.6–83	21.4–17	
Jan., 1900	....do	40–60 cents per dozen	9 cents per dozen	31–51 cents	70.7–85	29.3–15	
July, 1899	Early apples	$1.50 per bushel	90 cents per bushel	60 cents per bushel	40	60	Texas and Southwest apples.
Oct., 1899	First-grade apples	75 cents per bushel	35 cents per bushel	40 cents per bushel	53⅓	46⅔	Western York State apples.
July, 1899	Eggs (fresh)	16 cents per dozen	10 cents per dozen	6 cents per dozen	37½	62½	Ohio product.
Mar., 1900	....do	19 cents per dozen	9 cents per dozen	10 cents per dozen	52.6	47.4	Illinois and Wisconsin product.
Sept., 1899	Poultry (live)	12 and 13 cents per pound	4½ cents per pound	8½ cents per pound	65.3	34.7	From Kentucky.
June, 1900	Poultry (dressed)	14 cents per pound	7½ cents per pound	6½ cents per pound	46.4	53.6	From Ohio.
May, 1900	Strawberries (fancy)	30 cents per quart	15 cents per quart	15 cents per quart	50	50	Southern berries.
June, 1900	....do	12½ cents per quart	7½ cents per quart	5 cents per quart	40	60	Home product.
Oct., 1899	Hay (timothy)	$15 per ton	$11 per ton	$4	26⅔	73⅓	Ohio product.
Feb., 1900	....do	....do	....do	....do	26⅔	73⅓	Do.
Oct., 1899	Corn	44 cents per bushel	23½ cents per bushel	20½ cents per bushel	46⅗	53⅖	Illinois product.
Feb., 1900	....do	43 cents per bushel	23 cents per bushel	20 cents per bushel	46½	53½	Do.
Oct., 1899	Oats	32 cents per bushel	20 cents per bushel	12 cents per bushel	37½	62½	Do.
Feb., 1900	....do	30 cents per bushel	19 cents per bushel	11 cents per bushel	36⅔	63⅓	Do.
Oct., 1899	Cabbages	6–8 cents per head	3–5 cents per head	3 cents per head	37½–50	50–62½	
June, 1900	....do	....do	....do	....do	37½–50	50–62½	
July, 1899	Watermelons	30 cents each	8 cents each	22 cents each	73⅓	26⅔	From Georgia.
Sept., 1899	....do	25 cents each	....do	17 cents each	68	32	From Indiana.

5. FARM PRODUCE IN KANSAS CITY MARKET.[1]

The statistical result given below for Kansas City represent a market of nearly 200,000 consumers. This place is one of the leading markets for produce from territory lying south, west, and north of the Missouri River. There is therefore considerable competition, which is, however, materially lessened by the fact that certain supplies from different sections arrive in successive seasons rather than simultaneously. This market is therefore a continuous market, as, for example, in the case of strawberries, which arrive first from Texas from the south and continue until the northern supply runs out. Potatoes and other less perishable products compete almost constantly.

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[1] Reported by Mr. Cuthbert Powell, special agent, Kansas City, Mo.

Prices and expenses of distribution in Kansas City.

Year and month of sale.	Kind and grade of product.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.	Remarks.
					Per cent.	*Per cent.*	
Oct., 1899..	Irish potatoes, Kansas or home grown.[1]	25 to 30 cents; average, 27½ cents.	22.16 cents per bushel.	Brokerage for handling, 2½ cents per bushel; freight, 3 cents per bushel from Lering, Kans.; total, 5½ cents per bushel.	19.8	80.2	Competitive point, 20 miles from Kansas City.
	Irish potatoes, Iowa..	25 to 35 cents; average, 30 cents.	17.2 cents per bushel..	Brokerage for handling, 2 cents per bushel; freight, 10.8 cents per bushel from Prairie City, Iowa; total, 12.8 cents per bushel.	40.2	59.8	Competitive point, 298 miles from Kansas City.
	Irish potatoes, northern or Minnesota.	.....do................	13 cents per bushel...	Brokerage for handling, 2 cents per bushel; freight, 15 cents per bushel from North Branch, Minn.; total, 17 cents per bushel.	56.6	43.4	Noncompetitive point, 555 miles from Kansas City.
	Irish potatoes, Colorado.	45 to 55 cents; average, 50 cents.	27 cents per bushel...	Brokerage for handling, 2 cents per bushel; freight, 21 cents per bushel from Greeley, Colo.; total, 23 cents per bushel.	46	54	692 miles from Kansas City.
Apr., 1899..	Strawberries, Texas..	$3.90 to $4.85 per 24-quart crate; average, $4.37½.	$3.29½ per crate......	10 per cent commission for selling; expressage, 65 cents per crate from Dickinson, Tex.; total, $1.08 per crate.	24.68	75.22	Noncompeting point, 1,029 miles from Kansas City (Pacific Express).
	.....do................	$3.90 to $4.85 per 24-quart crate; average, $4.37.	.....do................	10 per cent commission for selling; expressage, 65 cents per crate from Alvin, Tex.; total, $1.08 per crate.	24.68	75.22	Noncompeting point, 921 miles from Kansas City (Pacific Express).
May, 1899..	Strawberries, Arkansas.	$1.15 to $2.55 per 24-quart crate; average, $1.85.	$1.35½ per crate......	10 per cent commission for selling; expressage, 30 cents per crate from Van Buren, Ark.; total, 49½ cents per crate.	26.7	73.3	Competitive point, 362 miles from Kansas City (Fargo and Pacific Express).
	.....do................	.....do................	.....do................	10 per cent commission for selling; expressage, 30 cents per crate from Rogers, Ark.; total, 49½ cents per crate.	26.7	73.3	Competitive point, 284 miles from Kansas City (Fargo and Pacific Express).
June, 1899.	Strawberries, Missouri.	$1.05 to $2.25 per 24-quart crate; average, $1.65.	$1.18½ per crate......	10 per cent commission for selling; expressage, 30 cents per crate from West Plains, Mo.; total, 46½ cents per crate.	28.18	71.82	Noncompeting point, 315 miles from Kansas City (Adams Express).
	.....do................	.....do................	$1.23½ per crate......	10 per cent commission for selling; expressage, 25 cents per crate from Nevada, Mo.; total, 41½ cents per crate.	25.15	74.85	Noncompeting point, 106 miles from Kansas City (Pacific Express).
	Butter, creamery, firsts.	14½ to 15 cents per pound; average, 14¾ cents.	9.95 cents per pound..	Handling charges, 1 cent per pound; freight from Abilene, Kans., 3.8 cents per pound; total, 4.8 cents per pound.	32.54	67.46	Competing point, 197 miles from Kansas City.
	.....do................	.....do................	.....do................	Handling charges, 1 cent per pound; freight from Ramona, Kans., 3.8 cents per pound; total, 4.8 cents per pound.	32.54	67.46	Noncompetitive point, 157 miles from Kansas City.

	....do	....do	10.25 cents per pound	Handling charges, 1 cent per pound; freight from Lincoln, Nebr., 3.5 cents per pound; total, 4.5 cents per pound.	30.50	69.50	Competing point, 210 miles from Kansas City.
	....do	....do	9.25 cents per pound	Handling charges, 1 cent per pound; freight from Superior, Nebr., 4.5 cents per pound; total, 5.5 cents per pound.	37.22	62.78	Noncompetitive point, 270 miles from Kansas City.
July, 1899	Watermelons, Texas	$4.50 to $13 per 100; average, $8.75 per 100.	$1.62 per 100	Commission for handling, 85 cents per 100; drayage, 50 cents per 100; freight from Hempstead, Tex., $5.78 per 100; total, $7.13 per 100.	81.5	18.5	Noncompeting point, 697 miles from Kansas City.
Aug., 1899	Watermelons, Missouri.	$4 to $11 per 100; average, $7.50 per 100.	$3.70 per 100	Commission for handling, 85 cents per 100; freight from Charleston, Mo., $2.45 per 100; drayage, 50 cents per 100; total, $3.80 per 100.	50.6	49.4	Noncompeting point, 464 miles from Kansas City.
Sept., 1899	Watermelons, Kansas.	$3.50 to $10 per 100; average, $6.75.	$2.70 per 100	Commission for handling, 85 cents per 100; drayage, 50 cents per 100; freight from Sylvia, Kans., $2.70 per 100; total, $4.05 per 100.	60	40	Competing point, 248 miles from Kansas City.
Jan., 1899	Oranges, California	$2 to $2.75 per box; average, $2.37½ per box.	$1.37½ per box	Commission for handling, 10 cents per box; freight from Riverside, Cal., 90 cents per box; total, $1 per box.	42.1	57.9	Noncompeting point, 1,727 miles from Kansas City.
	....do	....do	....do	Commission for handling, 10 cents per box; freight from Los Angeles, Cal., 90 cents per box; total, $1 per box.	42.1	57.9	Competitive point, 1,779 miles from Kansas City.
	Oranges, Mexican	$2.50 to $2.75 per box; average, $2.62½ per box.	82½ cents per box	Commission for handling, 10 cents per box; import duty, 80 cents per box; freight from Hermosillo, Mexico, 90 cents per box; total, $1.80.	68.5	31.5	Noncompeting point, 1,559 miles from Kansas City.
June, 1899	Milk	20 cents per gallon	15.6 cents per gallon	Handling charges, 2 cents per gallon; freight from Cameron, Mo., 2.4 cents per gallon; total, 4.4 cents per gallon.	22	78	A uniform rate, 45 miles from Kansas City.
	....do	....do	16.5 cents per gallon	Handling charges, 2 cents per gallon; freight from Belton, Mo., 1.5 cents per gallon; total, 3.5 cents per gallon.	17.5	82.5	A uniform rate, 28 miles from Kansas City.
	....do	....do	....do	Handling charges, 2 cents per gallon; freight from Edgerton, Mo., 1.5 cents per gallon; total, 3.5 cents per gallon.	17.5	82.5	A uniform rate, 39 miles from Kansas City.
	....do	....do	16 cents per gallon	Handling charges, 2 cents per gallon; freight from Tongenoxie, Kans., 2 cents per gallon; total, 4 cents per gallon.	20	80	[1]A uniform rate, 31½ miles from Kansas City.

[1] Home grown are sold by growers from wagons and they get all the price.

6. THE CITY OF WASHINGTON AS A FARM MARKET.

(1) *Peculiarity of the capital market.*[1]—This market is peculiarly situated and peculiarly constituted. Located between the northern and the southern sources of supplies it affords a market from both directions in successive stages of the seasons. Its constitution is variable. During the Congressional portion of the year it includes a considerable portion of population which seldom resides longer than five or six months of the year. This contingent of the consumers withdraws, as a factor in the market, during the summer season, thereby greatly reducing the demand of the place for the products of farm and garden from near-by and remote sources of production. This peculiarity may account for the proportionately low cost of distribution.

Farm products are brought to this city mainly from the District of Columbia and the adjacent States of Maryland and Virginia by two branches of the Baltimore and Ohio Railroad, the Pennsylvania Railroad, and the Southern Railway. These principal transporting agencies are supplemented by the various suburban electric car lines, the Potomac River steamboats, and the farm and market wagons. Like other Eastern cities, Washington affords a market for early vegetables from States farther south than the two mentioned, and fruits from as far distant as California.

(2) *Statistics of trade establishments, commissions, competition.*—The population of Washington is approximately 300,000. From the business directory the following data have been obtained:

Dealers in butter, cheese, and eggs	63
Commission merchants	53
Dairies	160
Fruit dealers	63
Produce dealers	157
Meat and provision dealers	250
Cattle dealers	4
Flour and feed dealers	85
Flour mills	4
Grain dealers	3
Grocers	1,259
Wholesale grocers	6
Poultry and game dealers	26

This year 292 licenses have been issued to peddlers (hucksters) of farm products. In this connection it is proper to mention that the municipal regulations permit farmers to sell by the wagon load.

The rates of commission charged by commission merchants here for selling all kinds of vegetables are 8 or 10 per cent; for eggs and poultry, 5 per cent. Farmers have not associated to organize their own commission agency here. Such an affair still prolongs a sickly existence in Baltimore, and in several of the counties of Maryland remnants of local "granges" are still to be found, the social feature being given more prominence than their effect upon market prices.

The competition in marketing the various products enumerated between near-by farmers supplying consumers in the city directly and dealers who get their main supply from more distant points varies with each article and with the seasons. A detailed statement of each product would increase the length of this report far beyond the bounds desired. In this matter of local and distant competition there is nothing that makes conditions in Washington peculiar and different from other Eastern cities.

The hauling distance for wagons rarely reaches beyond 10 miles.

(3) *The public regulation of the milk supply.*—The trade in milk or other products is not under the control of any combination of dealers. Hence the price is not affected by such means.

The standard price at which the bulk of the supply of milk which comes into the city is purchased of the producers is 14 cents per gallon. It goes out of the market or is delivered to the consumer at 8 cents per quart. This price does not vary throughout the year. A yearly contract is usually entered into between the dealers and the producers. There is no special arrangement between city distributers and country producers to prevent a surplus or scarcity of supply other than the usual laws governing supply and demand. One hundred miles has been given me as the railroad limit of the milk supply, and 10 miles for wagons. There is a rigid system of milk inspection under the control of the health department. I inclose a printed copy of their regulations for the government of dairies and dairy farms. This year 748 permits have been issued to milk importers having cows outside of the District of Columbia, and 270 permits to importers of milk having cows within the District. Permits have been issued to 817 milk distributers here. The system of districting the city among dealers does not prevail in Washington. The number of milk wagons visiting a given block depends upon the enterprise of each individual distributer and the option of his patron. From the figures given we find 1 milk distributer for about every 75 families. About 70 per cent of the milk supply for the city comes by rail, 20 per cent by wagon, and 10 per cent by steamboat. The largest quantity comes from Virginia over the Southern Railway. The Metropolitan Branch of the Baltimore and Ohio Railroad brings the larger part of the Maryland supply. Frederick, Md., is about the limit of distance. The proximity of the large city of Baltimore naturally diverts much of the trade from the last-mentioned State.

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[1] Reported by Mr. William H. Hardcastle, special agent, Washington, D. C.

DISTRICT OF COLUMBIA—REGULATIONS FOR THE GOVERNMENT OF DAIRIES AND DAIRY FARMS.

SECTION 1. No building or space shall be used for dairy purposes which is not well lighted and ventilated, which is not provided with a suitable floor; and, if such room or space be a cellar or subcellar, or be located in a cellar or subcellar, which is not properly concreted, guttered, and drained.

SEC. 2. No dairy shall be located or maintained within any kitchen, wash room, workshop, or inhabited room, nor in proximity to any water-closet, privy, cesspool, or urinal, nor in any room or space which is not of such size and construction as to permit the entire separation of all milk and milk products, both in process of handling and storing the same, from all probable sources of contamination either by dirt, noxious gases, infective organisms or substances, or anything liable to alter unnecessarily the quality of such milk or milk products.

SEC. 3. Every person maintaining a dairy shall provide for the use thereof, and shall use a sufficient number of receptacles, made of nonabsorbent material, for the reception, storage, and delivery of milk, and shall cause them to be kept clean and wholesome at all times; and having delivered any such receptacle to a consumer shall not again use the same for the reception, storage, or delivery of milk or cream in any form until it has been, to his personal knowledge, properly cleaned after such use.

SEC. 4. Every person maintaining a dairy shall provide for the use thereof a supply of pure and suitable water, sufficient for the proper washing of all cans, bottles, and appliances.

SEC. 5. Every person maintaining a dairy shall keep the same and all appurtenances thereto clean and wholesome at all times, and shall change the water in the coolers at least once each day.

SEC. 6. No building shall be used for stabling cows for dairy purposes which is not well lighted, ventilated, drained, and constructed, or which is not provided with stalls or with proper stanchions for anchoring the cows, so arranged as to allow not less than three and one-half feet width of space for each milch cow; or which is not provided with good and sufficient facilities for feeding the animals in a cleanly manner; or which contains less than six hundred cubic feet clear air space for each cow, unless the use of such building for stabling cows for dairy purposes has been authorized prior to the promulgation of these regulations, in which case it shall contain not less than five hundred cubic feet clear air space for each cow.

SEC. 7. No room shall be used for stabling cows for dairy purposes which contains any water-closet, privy, cesspool, urinal, or manure pit; nor shall any fowl, hog, horse, sheep, or goat be kept in any room used therefor.

SEC. 8. Every person using any premises for keeping cows for dairy purposes shall, when so directed by the health officer, erect and maintain in the stable, stall, shed, or yard connected therewith one or more proper receptacles for drinking water for such cows, and shall keep the same supplied with clean, fresh water, and none other.

SEC. 9. Every person using any premises for keeping cows for dairy purposes shall keep the entire premises clean and in good repair, and the buildings well painted or whitewashed.

SEC. 10. Every person using any premises for keeping cows for dairy purposes shall cause the dung to be removed from the stables at least twice daily, and always within one hour preceding every milking of the cows, and shall not allow any accumulation of dung within the building occupied by the cows, but shall, whenever in the opinion of the health officer it is required by local conditions and surroundings, provide temporary storage for the same and for other refuse in a separate place, which shall be covered, and which, when so ordered by said health officer, shall be a water-tight receptacle.

SEC. 11. Every person keeping cows for dairy purposes within the city of Washington or its more densely populated suburbs, or elsewhere in the District of Columbia, if, in the opinion of the health officer, local conditions require it, shall cause the inclosure in which such cows are kept to be graded and drained, so as to keep the surface reasonably dry and to prevent the accumulation of water therein, except as may be permitted for the purpose of supplying drinking water, and shall not permit any garbage, urine, fecal matter or similar substance to be placed or to remain in such inclosure, nor any open drain to run through it.

SEC. 12. Every person keeping cows for the production of milk for sale shall cause them to be kept clean and wholesome at all times, and shall cause the teats, and, if necessary, the udder, to be carefully cleaned by brushing, washing, or wiping before milking, and shall cause each such cow to be properly fed and watered.

SEC. 13. Any person using any premises for keeping cows for dairy purposes shall provide and use a sufficient number of receptacles, of nonabsorbent material, for the reception, storage, and delivery of milk, and shall keep them clean and wholesome at all times, and at milking time shall remove each receptacle, as soon as filled, from the stable or room in which the cows are kept; nor shall any milk or cream be stored or kept within any room used for stabling cows or other domestic animals.

SEC. 14. It shall be the duty of every person having charge or control of any premises upon which cows are kept to notify the health officer of the District of Columbia of the existence of any contagious or infectious disease among such cows, by letter delivered or mailed, within twenty-four hours after the discovery thereof, and to thoroughly isolate any cow or cows so diseased or which may reasonably be believed to be infected, and to exercise such other precautions as may be directed, in writing, by said health officer.

SEC. 15. Milkers and those engaged in the handling of milk or cream shall maintain strict cleanliness of their hands and persons while milking or while so engaged. It shall be the duty of every person holding a permit to maintain a dairy or dairy farm to enforce this regulation in reference to such persons as may assist them in the maintenance thereof.

SEC. 16. That any person violating any of the foregoing regulations shall, on conviction thereof in the police court, be punished by a fine of not more than ten dollars for each and every such offense, to be collected as other fines and penalties are collected.

SEC. 17. That the regulations for the government of dairies and dairy farms in the District of Columbia promulgated June 26, 1895, are hereby repealed.

WM. C. WOODWARD, M. D.,
Health Officer, District of Columbia.
JOHN W. ROSS,
JOHN B. WIGHT,
W. M. BLACK,
Commissioners of the District of Columbia.

(4) *Public markets, central and local.*—In addition to the large "Center Market" there are 8 other public markets under municipal control and supervision. On some of the streets immediately adjacent to these buildings farm products are sold directly to the consumers from the wagons of farmers. The wagons of hucksters, of course, go all over the city.

The many attractions, governmental, social, educational, religious, etc., of the capital city not only bring numerous visitors, but make it a delightful residence for that class of people who are able to buy both the delicacies of the season and the delicacies of all seasons and climes in and out of season. The increase in cold-storage facilities has kept pace with the city's growth in wealth, refinement, and in a population quick to avail itself of the conveniences, comforts, and luxuries that modern ideas and inventions have provided. Quite a paper could be written upon the various and varying effects upon prices the use of cold storage has produced. In some instances it has enhanced the marketable value of certain products by insuring their preservation for an increased demand. Again, it has a depreciating effect by diminishing the shrinkage and the possible scarcity of other products. These effects, however, do not differentiate Washington from other cities. The general tendency of cold storage is toward uniformity and equalization in prices of special products by lengthening their season of fruition and enjoyment. The cold-storage charges are as follows: Strawberries, from 20 to 35 cents per crate, according to size; apples and pears, 25 cents per barrel; celery and lettuce, sent in boxes and crates, from 10 to 25 cents; poultry, 50 cents per 100 pounds; crate of eggs (30 dozen), 15 cents; for cooling watermelons, 10 cents apiece.

(5) *Statistical results for fourteen products.*—The statistical results of the inquiry made at Washington give the prices of 15 different articles, together with the rates of freight charged on most of them, the mode of shipment and the sources from which the usual supply of products is obtained.

Prices and expenses of distribution in Washington, D. C.

Year and month of sale.	Kind and grade of product.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributors.	Percentage of consumer's price to producers.	Remarks.
					Per cent.	Per cent.	
Jan., 1900	Butter	35 cents per pound	25 cents per pound	10 cents per pound	28.57	71.43	The Southern Rwy. charges 54 cents per 100 pounds from Fredericksburg, Va.
July, 1899	do	25 cents per pound	19 cents per pound	6 cents per pound	24	76	
Jan., 1900	Cheese	18 cents per pound	12½ cents per pound	5½ cents per pound	30.56	69.44	The rates for cheese are same as for butter.
July, 1899	do	do	do	do	30.56	69.44	
Every month	Milk	8 cents per quart	14 cents per gallon	18 cents per gallon	56.25	43.75	
Jan., 1900	Oranges[1]	15 to 30 cents per dozen					Shipped in boxes from California and barrels from Florida.
Do	Onions	40 cents per peck	75 cents per bushel	85 cents per bushel	53⅛	46⅞	The Norfolk and Washington Steamboat Company charges 25 cents freight on 1 barrel, or at the rate of 20 cents per barrel on more than 1, from Norfolk, Va., to Washington.
July, 1899	do	60 cents per peck	$1.25 per bushel	$1.15 per bushel	47 11/12	52 1/12	
Jan., 1900	Live poultry	14 cents per pound	9 cents per pound	5 cents per pound	35.7	64.3	The Southern Rwy. charges 31 cents per 100 pounds from Manassas, Va.; 34 cents from Haymarket, Va., and 54 cents from Fredericksburg, Va. They are shipped in coops.
July, 1899	do	12¼ cents per pound	8 cents per pound	4¼ cents per pound	36	64	
Nov., 1899	Apples	30 cents per peck	$2 per barrel	$1 per barrel	33⅓	66⅔	The Norfolk and Washington Steamboat Company charges 25 cents freight for 1 barrel, and at the rate of 20 cents per barrel when more than 1 barrel is shipped, from Norfolk to Washington.
Apr., 1900	do	60 cents per peck	$5 per barrel	do	16⅔	83⅓	
Jan., 1900	Potatoes	75 cents per bushel	50 cents per bushel	25 cents per bushel	33⅓	66⅔	Steamboat rate from Norfolk, Va., 25 cents per barrel, or at the rate of 18 cents per barrel for more than 1.
July, 1899	Potatoes (new)	$2 per bushel	$1.50 per bushel	50 cents per bushel	25	75	
Aug., 1899	Watermelons	15 cents each	$5 per 100	10 cents each	66⅔	33⅓	Steamboat rate from Norfolk 1¼ cents per melon.
Jan., 1900	Cabbages	12 cents each	$8 per 100	4 cents each	33⅓	66⅔	The Southern Rwy. charges 21 cents a crate (150 pounds in crate) from Manassas, Va.
July, 1899	do	5 cents each	$3 per 100	2 cents each	40	60	
June, 1899	Strawberries	8 cents per box	3 cents per box	5 cents per box	62½	37½	Early berries shipped by express from North and South Carolina.
Sept., 1899	Timothy hay	85 cents per cwt	$14 per ton	$3 per ton	17⅗	82⅖	The Baltimore and Ohio R. R. charges $2.40 per ton for hay and corn from Gaithersburg, Md.
Mar., 1900	do	95 cents per cwt	$17 per ton	$2 per ton	11.7	88.3	
Nov., 1899	Corn	$2.25 per barrel	$1.75 per barrel	50 cents per barrel	22 2/9	77 7/9	
May, 1900	do	$3 per barrel	$2.50 per barrel	do	16⅔	83⅓	
Aug., 1899	Oats	40 cents per bushel	32 cents per bushel	8 cents per bushel	20	80	The supply of oats comes from the West.
Jan., 1900	do	50 cents per bushel	40 cents per bushel	10 cents per bushel	20	80	
Do	Dressed poultry	16 cents per pound	10 cents per pound	6 cents per pound	37½	62½	Dressed poultry is sent by express.
July, 1899	do	14 cents per pound	9 cents per pound	5 cents per pound	35.7	64.3	
Jan., 1900	Eggs	25 cents per dozen	18 cents per dozen	6 cents per dozen	24	76	The Southern Rwy. charges 26 cents freight on a crate of eggs (30 dozen) from Manassas; 29 cents from Haymarket, and 50 cents from Fredericksburg. Manassas is 15 miles distant.
July, 1899	do	18 cents per dozen	11 cents per dozen	7 cents per dozen	38 8/9	61 1/9	

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[1] The California producer receives for seedling oranges from $1.25 to $1.50 net per box, and for navel oranges $2 to $2.50 net per box. The freight and commission combined is $1.25 per box. Florida oranges net the producer from $2 to $2.50 per box, the combined expense for freight and commission being $1 per box. The retailer pays from $3 to $3.50 per box.

7. RICHMOND, VA., AS A FARM MARKET.[1]

(1) *Peculiarities of the Richmond market.*—There are peculiarities about Richmond as a market for farm products which require explanation before entering upon the question of "the organizations and methods of handling farm products," referred to me for discussion and report. Simply referring to a census report and seeing that Richmond is the capital city of the State of Virginia and has a population at the last census of about 80,000 people (a population now exceeding 100,000 people) and that it is the only city or town of large population in middle Virginia it might be reasonably assumed that it would be a good market for all ordinary farm and truck products. Inquiry among the farmers living in the section claiming Richmond as their market negatives this conclusion very strongly. These producers almost universally proclaim Richmond to be a poor market in which to sell farm products of almost every kind. This is undoubtedly true from the standpoint of the producers. There are several reasons for this condition of affairs, but the one primarily responsible for it is the fact that, although we have over 100,000 people living here, more than one-half of that total is made up of negroes who are engaged in occupations in which only low wages are paid. The negro even when well paid is not a consumer of high-priced or varied farm products. He prefers corn cakes, fat bacon and cabbage, and sweet potatoes to almost any other diet. When poorly paid he confines himself wholly to this diet. Practically, therefore, we have but a population of 50,000 people in the city who are consumers of a variety of the best farm and truck products. This population is easily and quickly supplied from the near-by country, a large section of which to the north of the city is naturally good trucking land and in the hands of a great number of small owners and occupiers who themselves raise and market their own crops. Richmond is again a poor producers' market from the fact that it is a very uncertain and fluctuating one. In the winter the houses are occupied, while in the summer (and this means here from May to November) the people who are the largest buyers of farm products are away from the city on their plantations in the country, or where not owning plantations living on the mountains 50 or 75 miles west of the city. This makes it difficult for producers to profitably cater to a city trade. These general remarks must be taken to apply to the markets for all the products about which I am asked to report, except hay, corn, oats, and tobacco.

(2) *Remarks as to special products—Milk.*—The Southern States never were dairying or live-stock States, and though this is now being somewhat changed in certain sections, slowly but surely the result is seen in the fact that the Southern people are not milk users. On thousands of farms to-day in the South it is impossible to get so much as a drink of milk for many months in the year; indeed, on probably the majority of farms it would only be possible to get milk at all except in the summer months. This indifference to a supply of milk is common in the towns and cities. People do not seem to regard it as a necessity and therefore only demand the smallest supply. The supply of the city of Richmond is almost wholly provided by a number of small dairymen residing on the outskirts of the city and keeping from 6 to 12 cows. These men retail their own milk and therefore secure the whole price charged to the consumer. There are two larger dairy companies having offices and stores in the city and handling the produce of from 50 to 150 cows each. Though nominally purchasers of milk from producers, the men who form the company in each case are themselves farmers and dairymen having their own cows on farms near the city, and they simply send in their milk to the dairy stores in the city where it is retailed from wagons owned by the company jointly. In this way they secure the distribution of the products of their private dairies at less cost than if each handled his own milk separately. One of these companies does buy some milk from a few farmers outside of the membership of the company, but only a limited quantity. The price paid to these producers is given in the statistical report, as also the average retail price to consumers in the city. I have not been able to find that a single can of milk is delivered into the city by any of the railroads. I do not believe that any supply comes in by rail at all. It is brought by wagon as much as 6 or 8 miles. There is no combination to keep up the cost to the consumer, nor is such an one likely or at all probable to succeed in the face of the facts stated.

Butter.—From facts stated with reference to the milk supply it will be seen that any local supply of butter to the city of Richmond can at best be only small. There are a number of small farmers living within a radius of 6 or 8 miles of the city, many, if not most of them, being Northern settlers here who keep a few cows and make a small quantity of butter every week, which they sell and deliver personally to private consumers in the city, and there are one or two larger dairy farmers who make from 50 to 100 pounds of butter per week, who either deliver to private customers or supply one or two stores having a trade calling for this class of butter. The proprietor of the leading store in the city handling this class of trade tells me that he does not believe there are 500 pounds of butter made on Virginia farms sold in the city of Richmond in a week. There is a prejudice against Virginia butter in the city, and it is well founded. Virginia farmers are not dairymen, and will not take pains to make good butter or butter which can compare in flavor or keeping qualities with New York or Elgin butter. They have also a natural difficulty to contend against in the fact that the wild onion is so abundant and persistent in its growth in the pastures and meadows that it ruins the flavor of all butter and milk in the spring and early summer months.

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[1] Reported by Mr. J. F. Jackson, special agent, Richmond, Va.

There is probably from 10,000 to 12,000 pounds of New York and Illinois butter brought to the city every week by merchants. These men are not producers, but merely dealers. There is a quantity of butter of very low grade shipped into the city every week from country stores who take it in trade at from 10 to 15 cents per pound. It is not fit for consumption as received, but goes to the manufacturer of process butter and reappears in the market and stores as oleomargarine or process butter.

Cheese.—I am not aware that there is any cheese now made in the State; certainly there is none made in this section of the State. A few years ago there were one or two cheese factories in Piedmont, Va., but they could not get a constant supply of milk sufficient to make the business profitable. Whatever cheese is consumed here, and it is a very small quantity at best, comes from the North, and is brought here by merchants and not producers.

Oranges.—There is, of course, no local production of oranges here. They are brought here by merchants from Florida and elsewhere, and I know nothing of the price producers get for them. The price to consumers here varies with the supply, which this year has been plentiful and the price reasonable.

Apples.—This fruit, being a staple product of the State, the supply in the city is, in a year of ordinary productiveness, very ample. Probably there are from 100,000 to 150,000 barrels of apples shipped from the State, mainly to England and the continent of Europe, in a year of good production. The section of the State in which Richmond is situated does not, however, produce any good varieties of keeping apples, and therefore, apart from the supply of summer apples, is dependent upon Piedmont and southwest Virginia and the Northern States for its supply. These are consigned to commission merchants here for sale, and are sold by the barrel of three bushels and retailed by the hucksters, market men, and stores by the peck. The average price for the past 2 or 3 years to the consumer is given in the statistical report, while the same report gives the average price for different varieties realized by the commission merchant on behalf of the producer, out of which must come freight, drayage, and commission.

Poultry (live and dressed) and eggs.—The supply of poultry comes to this city from a wide area of the State, probably from a greater distance than any other product of the farm. It is usually in abundance for the demands of the population, and yet the price is maintained at a fairly profitable rate for the producer. Early spring chickens usually come on the market in March and April, and are then sold at so much a head. Later they are bought from the producer by weight, but are generally sold by the retailer to the consumer at so much per head. The trade is mainly in the hands of dealers, few producers selling direct to consumers. Eggs are bought and sold by the dozen, and largely by dealers. The local production is, however, considerable, and these are largely sold by the producer directly to the consumer.

Onions (green), Irish potatoes, sweet potatoes, cabbages, watermelons, and strawberries are produced in very great quantities, locally, there being a belt of rich trucking land on the north of the city, extending 10 to 15 miles from the city boundary. This is divided into small truck farms, and the produce is brought into the city every day all the year round. As many as 500 truckers' carts will sometimes, in the height of the growing season, come into the city per day. These carts are run by the owners and producers of the crops, who sell the products to the city grocers, market hucksters, and directly to the consumers. The competition is great and as a result prices are reasonable, and yet the growers make money. Their expenses are small. It is a very difficult matter to place a standard price on any of these products, as the supply is usually so large and the competition so great. Of many products, such as sweet potatoes and cabbages, the supply is much greater than the local demand, and the surplus is bought by dealers and shipped North and West. For this surplus the price obtained by the producer is usually very low, and it is doubtful whether there is much if any profit in its production. The possibility, however, of their disposing of it prevents an absolute glut in the local market, and this enables the portion sold here to be disposed of profitably.

Of Irish potatoes the local production is small, as the crop matures too early to keep well through the winter, and the city market depends largely on Northern and Western grown potatoes for its supply, except during 2 or 3 months in the spring and early summer. Sweet and Irish potatoes are bought and sold by the dealers by the barrel of 3 bushels and retailed to the consumer by the peck.

Hay, corn, oats.—Corn and oats are largely supplied to the city by farmers all over the State and by Western dealers, and are sold by the bushel on the corn exchange daily to the local dealers by the commission merchant. There are 2 or 3 milling concerns in the city which buy largely and grind for local consumption. Hay is supplied in limited quantities by local growers, but not in nearly sufficient quantities to meet city requirements. The balance of the requirement is largely met by Western hay, which comes into the city by carloads all the year round. Hay is sold by the ton of 2,000 pounds. The supply of this Western hay largely controls the price at which locally produced hay is sold.

(3) *The tobacco trade—methods and expenses.*—The tobacco trade of the city of Richmond is a large factor—probably the largest in the financial prosperity of the place. It has also a large bearing upon the prosperity of the people of the State. Tobacco is sold by auction to a large extent; indeed, the bulk of the State production is thus disposed of, and much of that from points outside the State. The crops are brought by the producer by road in wagons from points 50 miles away and by rail from much farther distances, and is piled up on the warehouse floors and there auctioned off to the highest bidder.

The sale is thus made direct from the producer to the consumer (the manufacturer or dealer). The only charges are for warehouse fees, auctioneer's fees, weighing, and drayage fees, and a small commission. The warehouse owner pays the producer the price realized for the tobacco, less the charges, on the fall of the hammer, and himself collects from the buyer. The quantity of tobacco sold in this way for the year now closing (May) has been 3,322,933 pounds of dark of various types and 3,000,000 pounds of bright tobacco. The statistical results given herewith show the standard prices at which the various articles come into the markets of this city and go out of the same.

(4) *Statistics of trade establishments, commissions, cooperation.*—The number of commission houses is 53. The number of wholesale dealers is incapable of being accurately stated, as most of the commission houses are also wholesale dealers. The number of retail dealers in farm products is also incapable of being stated, as nearly every corner grocery in the city handles some of these products more or less, and there are hundreds of these. Every truck grower who brings his products into the city for sale—and in the earlier part of this report I have stated that as many as 500 of these men are sometimes here per day with their carts—pays a license of 10 cents per day, which authorizes him to occupy a stand on the street near the public markets of this city or to peddle his products around the city for that day.

The following are rates of commission charged on the sale of the various products named: Ten per cent on all fruits, vegetables, eggs, poultry, and grain. (See statistical results for rates on tobacco.)

A few years ago a number of farmers and truckers selling their products in this city organized a selling agency and supply store on a cooperative basis, but after carrying on business for about 2 years were compelled to wind up the concern, having lost the whole or nearly the whole of the capital invested.

As indicated previously, the principal supplies for the markets of the city outside the supply of apples, dry onions, Irish potatoes, and live and dead poultry, and eggs, and which are supplied by the producers and not by merchants or dealers, comes from near-by points or, at any rate, from points not outside the State (except in so far as some supplies of early strawberries and early vegetables come in small quantities from Florida, South Carolina, and North Carolina), and are shipped here not from any particular centers of trade, but in small shipments of 1 or 2 crates, or barrels, or cases from the small wayside depots on the several lines of railways running into the city from the West and South. Apples are shipped here from points on the Chesapeake and Ohio Railroad in Piedmont, Va., such as Charlottesville, Staunton, and intermediate points within 150 miles of the city. Winter cabbage is shipped here from points in southwest Virginia on the Norfolk and Western Railroad between Roanoke and Wytheville, while

Irish potatoes for winter sale come here from points in Ohio and farther North and West.

(5) *Competition, public markets, and cold storage.*—There is very active competition between local producers and dealers in all vegetable products and truck crops, and also in live and dead poultry, eggs, corn, and oats. These local producers sell largely directly to consumers and to hucksters in the city markets, and thus prevent the commission men and general wholesale dealers from controlling the markets. These products are hauled into the city by the farmers a distance of 15 or 20 miles.

No combination is in control of any of the products named.

There are three public market places provided by the city, with accommodations for near-by wholesale and retail delivery by farmers, dealers, and consumers.

There are 2 cold-storage depots in the city, but they have not been long established. The one belongs to a pork-packing concern and the other to a dry cold-storage company. They are not largely used as yet, though some fruit growers have tried the system, and find it of service to them. Schedule of rates of charges made by the dry cold-storage company are included elsewhere; the charges made by the other company are about the same.

(6) *Statistical results for 10 products.*—The statistical results of this inquiry are given herewith. It includes among other farm products consumed in the household the important product leaf tobacco, for which Richmond is one of the largest markets, both for local consumption and for shipment to other points, domestic and foreign.

Prices and expenses of distribution in Richmond, Va.

Year and month of sale.	Kind and grade of product.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.
					Per ct.	*Per ct.*
Oct. to Dec., 1899.	Winesap apples...	25 cents per peck.	$2.50 per barrel of 3 bushels.	50 cents per barrel.	16	84
	Pippin apples.....	37½ cents per peck.	$3.50 per barrel.	$1 per barrel..	22	78
Jan., 1900......	Onions (dry).....	30 cents per peck.	$1 75 per barrel.	$1.85 per barrel.	51	49
Mar. to May...	Spring chickens..	35 cents per pound.	25 cents per pound.	10 cents per pound.	30	70
June to Dec., 1899.	Chickens.........	12½ cents per pound.	10 cents per pound.	2½ cents per pound.	20	80
Jan. to May, 1900.	Eggs.............	20 cents per dozen.	15 cents per dozen.	5 cents per dozen.	25	75
June to Sept., 1899.	.....do...........	15 cents per dozen.	10 cents per dozen.	.....do.......	25	75
May and June, 1900.	Irish potatoes.....	50 cents per peck.	$3 per barrel of 3 bushels.	$3 per barrel..	50	50
July to May, 1899 and 1900.	.....do...........	75 cents per bushel.	50 cents per bushel.	25 cents per bushel.	33⅓	66⅔
Sept. to Mar., 1899 and 1900.	Sweet potatoes...	25 cents per peck.	$1.25 per barrel of 3 bushels.	$1.75 per barrel.	55	45
May and June, 1899.	Cabbages.........	5 cents per head.	1⅔ cents per head.	3⅓ cents per head.	70	30
Oct. to Feb., 1899 and 1900.	.....do...........	10 cents per head.	2½ cents per head.	7½ cents per head.	75	25
July to Sept., 1899.	Watermelons.....	10 cents each..	5 cents each....	5 cents........	50	50
All the year 1899.	New milk.........	6 cents per quart.[1]	3 cents per quart	3 cents per quart.	50	50
All the year 1898.	Sun-cured tobacco	7¼ cents per pound.	6¾ cents per pound.	½ cent per pound,	7	93
All the year 1899.	Dark loose tobacco	$4.80 per 100 pounds.	$4.30 per 100 pounds.	50 cents per 100 pounds.	10	90
	Heavy shipping and export tobacco.	8¼ cents per pound.	7¾ cents per pound.	½ cent per pound.	6	94
	Bright tobacco....	5½ cents per pound.	5 cents per pound.	.....do.......	9	91

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[1] For the small quantity purchased by city dealers from country producers.

8. ATLANTA—A TYPICAL SOUTHERN MARKET.[1]

(1) *Undeveloped condition of the Atlanta market.*—Atlanta has a population of 120,000 and is reached by 25 railroad lines from the producing territory. As a farm market it is undeveloped and lacking in that degree of organization which insures a fair degree of regularity in supply and stability in prices. Consequently the distributive agencies shift the risks of the business upon the producer and the consumer.

Atlanta commission men sell for 10 per cent. Farmers have no organizations. Peach growers are trying to organize. Chickens, turkeys, eggs, potatoes, and cabbage are largely brought in on wagons. Melons are shipped from Florida and southern Georgia. Strawberries come in May. Cheese is bought in Chicago and Cincinnati; apples come from Michigan; some are brought in on wagons from surrounding country. There is no regular market in the city. The commission men sell wholesale and retail, and retailers sell by wholesale. The retailers have an organization, but it is practically useless. The whole business is chaotic for want of systematic organization among the several interests. Cold storage is not ample or systematic. An effort was made to secure such facilities, but failed. There are two small concerns which are quite a convenience in handling meats and a few vegetables, but they do not affect prices or profits materially. The average stock of butter on hand is 4,000 pounds. There are about 1,100 persons selling milk, some keeping only 2 or 3 cows. A few dairies keep their herds 10 or 20 miles out and bring in milk on trains. Milk wagons come in from 2 to 10 miles. There is no creamery here. About one-half of the butter comes by rail. Freight on oranges from Los Angeles is 90 cents per box, 326 boxes to the car; from Florida the freight is 75 cents per box sent by express. Oranges from California and from the Gulf States come in competition to a certain extent. The California crop continues to come, however, after the Florida crop is exhausted. The Florida orange is considered much superior to the California orange, and sells for a higher price. In fact, California oranges will hardly sell here while the Florida orange is on the market, although offered at a lower price. Almost all other perishable articles, such as fruits and vegetables, begin coming very early from Florida. As the season advances, first southern, then middle, and then northern Georgia each have its run; and then some come from farther North or from cold storage.

(2) *Unfavorable position of the producer.*—Atlanta has no regular public market. First wholesale commission men and then retail dealers, and then wagons from the surrounding country supply the demand and scramble to such an extent as to greatly reduce prices. Perhaps butter from Northern creameries and from home sources has the keenest competition and is most affected in price. The cost of laying down Elgin butter has a good deal to do with the prices paid for the local product. Farm prices are controlled almost entirely by supply and demand, and as these are irregular the fluctuations are violent and extreme. For instance, strawberries are abundant one day at 6 to 8 cents per quart; on another day they will probably be 10 to 12½ cents per quart. With almost every article there is a minimum price at which shipments would cease to come in, and cutting of the supply will rally prices. Many shippers lose money in this way, but the dealers will keep right on all the same. The commission trade is reported as prospering—"most all get rich"—while the producer makes very little money. These retail traders come from all sources. Very many of them were farmers, and seeing a better chance here have left their farms and entered the commission business. Many of them have failed in other lines. In the fruit trade Italians and Greeks control everything. The city is greatly in need of a general market to remedy its chaotic condition of trade in farm products. Organization on the part of the truckers would improve conditions, but it is hard to get them to do so.

There are 42 commission houses, 25 wholesale dealers, and 560 retail establishments which handle farm products. Maimed soldiers peddle without license.

(3) *Statistical results for 18 products.*—The statistical results of the inquiry at Atlanta are given herewith for 18 different articles which enter largely into household consumption.

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[1] Reported by Mr. H. B. Hunnicutt, special agent, Atlanta, Ga.

Prices and expenses of distribution at Atlanta, Ga.

Year and month of sale.	Kind and grade of product.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.
					Per ct.	*Per ct.*
1899 and 1900; average for one year.	Sweet milk[1]	28 cents per gallon.	14 cents per gallon.	14 cents per gallon.	50	50
	Buttermilk[1]	10 cents per gallon.	5 cents per gallon.	5 cents per gallon.	50	50
	Country butter	15 cents per pound.	10 cents per pound.	5 cents per pound.	33⅓	66⅔
	Creamery butter	25 cents per pound.	18 cents per pound.	7 cents per pound.	28	72
	Cheese	16⅔ cents per pound.	10 cents per pound.	6⅔ cents per pound.	40	60
	Florida oranges[2]	50 cents per dozen.	12 cents per dozen.	38 cents per dozen.	76	24
	California and Sicily oranges.[2]	30 cents per dozen.	6 cents per dozen.	24 cents per dozen.	80	20
	Apples[3]	50 cents per peck.	10 cents per peck.	40 cents per peck.	80	20
	Onions[3]	40 cents per peck.	15 cents per peck.	25 cents per peck.	62½	37½
September to May, 1899-1900.	Chickens[4]	35 cents each	20 cents each	15 cents each	42$\frac{6}{7}$	57$\frac{1}{7}$
	Turkeys	15 cents per pound.	10 cents per pound.	5 cents per pound.	33⅓	66⅔
May, 1899, to May, 1900.	Eggs	22½ cents per dozen.	12½ cents per dozen.	10 cents per dozen.	44	56
	Potatoes	20 cents per peck.	12½ cents per peck.	7½ cents per peck.	37½	62½
	Cabbage	1½ cents per pound.	¾ cent per pound.	¾ cent per pound.	50	50
June to September, 1899.	Melons	do	do	do	50	50
March to June, 1900.	Strawberries	14 cents per quart.	6 cents per quart.	8 cents per quart.	57$\frac{1}{7}$	42$\frac{6}{7}$
1899 to 1900	Hay	$18 per ton	$9 per ton	$9 per ton	50	50
	Corn	60 cents per bushel.	30 cents per bushel.	30 cents per bushel.	50	50
	Oats	45 cents per bushel.	do	15 cents per bushel.	33⅓	66⅔

[1] Steady market.
[2] Express is heavy, but the points of shipment are so scattered one can not get average price.
[3] Mostly from Michigan and north Georgia; wagons.
[4] Summer market too uncertain; all sizes and prices from 8 to 50 cents each.

9. FARM MARKETS AT SAN ANTONIO, TEX.[1]

(1) *Commercial position of San Antonio.*—San Antonio may be taken as a representative Southern market. The following statement of prices and expenses of distribution of farm products presents a true proportion between the amount paid to the distributer and the amount received by the producers of the products. The scope of the inquiry covers the majority of the leading farm products produced and sold in this market.

The majority of farm products in this section of the country is handled direct from the producer to the consumer. This is especially true of such products as milk, butter, poultry, eggs, vegetables, beef, and hay. The greater portion of the corn and oats consumed in this city is shipped here from Texas or Kansas points, except in years when we have a rainfall of above the ordinary, such as the present year. San Antonio is situated in a section ordinarily not blessed with as much rain as the northern, central, and eastern portions of the State. Until within the past 2 or 3 years the great bulk of vegetables consumed in San Antonio were produced by irrigated farms and gardens near this city and are on the market at all seasons of the year.

(2) *Recent development of Texas truck farming.*—Within the past 2 or 3 years the truck-farm industry of Texas has assumed wonderful and unexpected proportions. It has been demonstrated that a great portion of Texas, especially

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[1] Reported by Mr. Vories P. Brown, special agent, San Antonio, Tex.

that known as the Texas coast country, can produce vegetables and fruits of almost all kinds grown in any section of this country from 4 to 6 weeks earlier than they can be produced in the most favored sections of California; hence San Antonio, within the past 2 or 3 years, has received these products largely from the Texas coast country.

Nueces County, for instance, the county of which Corpus Christi is the county seat, produced this year something like $100,000 worth of truck products, while only 3 or 4 years ago not $1 worth of this class of products was produced in that country and sent to northern Texas and Northern and Eastern markets. The total acreage planted in cabbage this year in Nueces County was about 300 acres, and there was a realization of about $225 from each acre planted in this staple crop. This is perhaps the most remunerative showing ever made in the cabbage industry in Texas, and perhaps in the United States. Next year it is estimated that at least 1,000 acres will be devoted in that county to the cultivation of cabbage alone, and should the demand be as brisk and the product as compact as this season, the Nueces County cabbage growers will realize about $250,000 therefrom. The truck industry is rapidly developing, not only in Nueces County, but in at least 100 counties in south and southeast Texas.

(3) *Restriction of trade by excessive freights and unfair commissions.*—That which troubled the Texas grower more than anything else, prior to a year or so ago, was in securing transportation rates low enough to permit him to get his products to market with some per cent of profit, and in finding commission men who would deal honestly with producers. However, within the past 2 or 3 years truck farmers' organizations have sprung up in almost every truck-producing section of the State, and Texas has now what is known as the State Truck Growers' Association. Through the efforts of these organizations the various railroads in the State have made greatly reduced rates for these products, and the truck farmers themselves have established agencies in Northern and Eastern cities in charge of their own men for the handling of these products at those points.

The great trouble with which the Texas producer has to contend, where there is a large surplus, is the question of transportation charges to markets. Some years ago the writer hereof took up with the Texas State railway commission the question of freight rates on wool from Texas wool-producing points to this city. For instance, the Southern Pacific Railway Company was charging $1.20 per 100 pounds for hauling wool in carload lots from Longfellow, Tex., to San Antonio, a distance of 120 miles, while the same company was only charging 80 cents per 100 pounds for hauling the same product in carload lots from San Francisco through lower California, through Longfellow, Tex., through San Antonio to New York, a distance many times greater. When I called the attention of the railway officers to this matter and tried to have them remedy same, they simply stated: "We can not do it, and what are you going to do about it?" The matter was referred to the Texas railway commission, and they answered that they were powerless to act in the matter.

In years of drought this section of the country, when farmers around San Antonio produced little or no corn and when there was plenty in what is known as the black-land section of north and east Texas, San Antonio was consuming Kansas corn, because the Kansas farmer could ship his corn in carload lots from Kansas points to San Antonio at a much lower figure than could the northern Texas farmer, who resided only about one-third the distance, to get his product to this same market.

(4) *Miscellaneous conditions of market.*—The products of truck gardens and farms in the vicinity of San Antonio are disposed of mainly by the producers themselves. In this city there are several large plazas or market centers devoted exclusively to the marketing of these products, and consumers do most of their marketing on these plazas. There is also being constructed in this city at present one of the largest market houses in the South, for which the city credit is pledged in bonds issued for construction.

Milk sold in San Antonio is not handled by middlemen, but is marketed directly by the producer to the consumer.

There are about a dozen strictly commission houses handling farm and garden products in this city, while almost every retail store handles such products as potatoes, corn, hay, vegetables, etc. As a rule, the rate of commission charged by commission merchants for selling different farm products is 10 per cent. No attempt has been made by farmers tributary to San Antonio to organize their own commission agencies, except truck farmers as herein referred to. Most of the vegetables and truck products coming to San Antonio from outside points by rail come from Rockport, Corpus Christi, Sinton, Mathis, Beeville, and other points on the line of the San Antonio and Aransas Pass Railway. These products are now coming in sharp competition with products produced by farmers and gardeners living in San Antonio and immediate vicinity.

No product of the ranch or farm, so far as the reporter knows, is under the control of a combination of dealers or commission merchants. This would be impossible here, owing to the fact that so much more of these products are produced here than are consumed.

There is no such thing as scarcity of milk here. Almost every farmer and stock farmer living within wagon distance of San Antonio produces more milk than he consumes, and as we have no creamery in this part of the country the milk is pure, plentiful, and cheap.

San Antonio is somewhat lacking in cold-storage facilities. However, the Armour Packing Company has just erected a large cold-storage plant in this city.

(5) *Railway charge for marketing Texas beef cattle.*—The International and Great Northern Railway charges the following rates on beef cattle: From San Antonio to Kansas City, $106.70 per 36-foot car, and to Chicago $131.45 per 36-foot car. As the average load is 22 head of 3-year-olds per car, this would make the cost of transportation in Kansas City $4.85 and in Chicago $5.97½ per head. The rate on both corn and oats in carload lots from New Braunfels, 30 miles north, to San Antonio is 5½ cents per 100 pounds; from Austin, 80 miles north, to San Antonio, 8 cents per 100 pounds, and from Taylor, 115 miles north, to San Antonio, 9½ cents per 100 pounds; minimum weight, 24,000 pounds.

Relative to the cost of getting Texas cattle to market, we will take a 3-year-old Texas steer which will average, say, 1,000 pounds and sell at Kansas City at 4 cents per pound. The gross price will be $40. It will cost the Texas producer to market this steer at Kansas City, as follows: Freight per head, $5; commission, 50 cents; yardage, 25 cents; feed in yards, 10 cents; feed en route, 15 cents; total, $6. An animal will shrink from 40 to 50 pounds from here to any of the big Western markets. The above charges also apply to Chicago, with a differential in freight rates of 11½ cents per 100 pounds. Now that catle are bringing higher prices the cattle raisers do not object so strenuously to $6 per head for marketing a 3-year-old steer as they formerly did, and it costs now only about 15 per cent of the steer's market value to get him to the point of destination. However, when the average price of the Texas steer weighing about 1,000 pounds (an average 3-year-old steer) was $18 on the range, and he brought, say, $24 on the market, the transportation company absorbed nearly one-third of the entire value. The stockmen in Texas hope in the future to greatly reduce the cost of marketing their cattle and other live stock, as we confidently believe it is only a question of a very few years until a large number of packeries will be established on the Texas coast, in which event Texas stockmen will receive from 40 to 50 per cent over present charges paid transportation companies.

(6) *Statistical results for 25 products.*—The statistical results of the inquiry at San Antonio embrace the kinds of farm products which play a leading part in that market for domestic consumption. A larger variety of minor vegetables is included than one generally finds in other markets. This market is climatically a semitropical market, and therefore the variety of vegetables exceeds that of a more northern locality in point of their importance in consumption. San Antonio has a population of about 60,000.

Prices and expenses of distribution in San Antonio, Tex.

Year and month of sale.	Kind and grade of product.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.
					Per ct.	*Per ct.*
Apr., 1900	Sweet potatoes	$1 per bushel	80 cents per bushel	20 cents	20	80
	Irish potatoes	$1.50 per bushel	$1.25 per bushel	25 cents	16⅔	83⅓
	Beans	$2.40 per bushel	$1.80 per bushel	60 cents	25	75
	Cabbages	5 cents per pound	2½ cents per pound	2½ cents	50	50
	String beans	$1.25 per bushel	$1 per bushel	25 cents	20	80
	Strawberries	$3.60, 24-quart crate	$3, 24-quart crate	60 cents	16⅔	83⅓
	Blackberries	do	do	do	16⅔	83⅓
	Celery	5 cents per bunch	3 cents per bunch	2 cents	40	60
	Green peas	5 cents per quart	3 cents per quart	do	40	60
	Parsnips	5 cents per bunch	3 cents per bunch	do	40	60
	Turnips	do	do	do	40	60
	Onions	$2 per bushel	$1.60 per bushel	40 cents	20	80
July, 1899	Watermelons	25 cents, 40-pound melon	15 cents, 40-pound melon	10 cents	40	60

Prices and expenses of distribution in San Antonio, Tex.—Continued.

Year and month of sale.	Kind and grade of product.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.
					Per ct.	*Per ct.*
Apr., 1900	Cauliflower	$2 per dozen	$1.50 per dozen	50 cents	25	75
	Cucumbers	$2 per ¼ bushel	$1.50 per ¼ bushel	do	25	75
	Egg plant	$3 per crate	$2 per crate	$1	33⅓	66⅔
July, 1899	Figs, green	$2 per bushel	$1.50 per bushel	50 cents	25	75
Oct., 1899	Hay, native	$10 per ton	$8 per ton	$2 per ton.	20	80
	Sorgum, hay	do	do	do	20	80
Apr., 1900	Corn, shelled	50 cents per bushel.	45 cents per bushel.	5 cents per bushel.	10	90
	Oats	35 cents per bushel.	30 cents per bushel.	do	14²⁄₇	85⁵⁄₇
	Eggs	12 cents per dozen.	10 cents per bushel.	2 cents per dozen.	16⅔	83⅓
	Butter	30 cents per pound.	25 cents per pound.	5 cents per pound.	16⅔	83⅓
	Milk[1]	6 cents per quart	6 cents per quart			100
	Cattle on hoof[2] (3-year-old steer, 1,000 pounds.)	At Kansas City, $40.	At Texas, $34	$6	15	85

[1] All milk sold in San Antonio marketed direct by producer.

[2] The gross expense of distribution on aged cattle from San Antonio to Kansas City is about $6 per head; to Chicago and differential of, 11¼ cents per hundred. On calves the cost of marketing would be about $3 per head, yearlings. In other words, transportation and commission to Kansas City would cost the producer an average of 15 per cent and to Chicago between 17 and 18 per cent.

10. MADISON, WIS., AS A FARM MARKET.[1]

(1) *High expense of local distribution.*—Madison, the capitol of Wisconsin, is a city of 18,000 to 20,000 people, and represents the commercial development of smaller western cities. The principal industries of the State are dairying, stock raising, tobacco raising, and lumbering. So far as it has been possible to ascertain there is no organization in Madison or vicinity for the purpose of facilitating the exchange of farm products between producers and city consumers. Farmers have no organization or commission agency of their own. The city has devoted a part of a certain street to the use of those who have farm products for sale, chiefly hay, corn, oats, potatoes, wood, and, especially during the Christmas holidays, dressed poultry and meat. No license fee is charged for the use of this market place. There seems to be little doubt that a properly organized commission or cooperative agency would benefit both producers and consumers. Under present conditions the expense of distribution of local products to consumers in the city is about 20 per cent, sometimes even 50 per cent of the consumers' price.

Strictly speaking, there are no commission houses in Madison, and but 2 doing a wholesale business in farm products. There are 50 retail stores buying directly from producers. The city charges no license fee for peddling farm products, hence it is difficult to give the number of peddlers. Many farmers have a small number of city customers whom they supply regularly with eggs, butter, dressed poultry, vegetables, and small fruit. Farmers, however, make comparatively little butter, but sell the milk to the creameries and cheese factories. The price paid for the milk, depends upon the amount of butter fat in the milk, averaging about 90 cents per 100 pounds, or 50 quarts.

(2) *Expense of farm products from distant points.*—Farm products from distant points are purchased by local wholesale dealers from commission men in Chicago. It is impossible to say definitely what percentage they charge for doing business, a close estimate would be 15 or 20 per cent. Farmers have no commission agency of their own.

Apples are imported from New York, Michigan, Illinois, and California. Early strawberries from Van Buren, Ark.; Anna, Ill., and Mississippi. Melons from Blodgett, Mo.; Georgia, and Muscatine, Iowa. Onions from La Cross, New Orleans, and from Bermuda. Oranges from Florida and California. Cabbage from California. All these come from Chicago over the Chicago, Milwakee and St. Paul, the Chicago and Northwestern, and the Illinois Central railways. Freight is 40 cents a hundred, or in car lots, 28 cents.

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[1] Reported by Mr. A. A. Munro, special agent, Madison, Wis.

There does not seem to be much competition between farmers and dealers in selling the above products. In the first place, these are imported from earlier climates before the local crops come into the market. Again, from lack of facilities for bringing the producer and consumer together, but a small proportion of the local crop is sold direct. Wisconsin ships large quantities of late potatoes to points outside the State, so that market prices outside control the local market. The retail dealers draw their supplies from a radius of 15 or more miles outside of the city. No combination of dealers for the control of prices has been reported.

(3) *The local milk trade.*—There are about 40 persons engaged in the milk retail business, with 50 or 60 wagons. There does not seem to be any understanding among milk dealers, even with regard to districting the city for convenience in distribution. Twenty-five wagons, representing as many owners, delivered milk in a section of the city consisting of 25 blocks, between 5 and 8 o'clock of one morning. There is an understanding with creameries in the city whereby the distributers may sell any surplus milk they may have, or buy in case of scarcity of supply. The supply of milk is almost entirely produced within a radius of 6 or 8 miles from the city. There is no licensing of milk distributers or inspection of dairies by the city, but dairies are subject to inspection by the State dairy and food commission. Most of the milk distributers produce their own milk. A few have contracts with farmers for a stated number of quarts per day at a stated price, usually 2 cents per quart during June, July, and August, and 2½ cents during the rest of the year. The milk with but few exceptions is sold at a uniform price of 5 cents per quart during the year to retail customers, and 3½ cents per quart to restaurants and hotels. It is safe to say that the greater proportion of farm products passes through the hands of dealers. When eggs and butter are sold to retailers it is usually in exchange for other goods. They are often sold at the same price or a very slight advance for cash. Chickens are sold to the retail meat markets alive. They lose about one-half pound in dressing.

(4) *Cost of marketing Wisconsin tobacco.*—Tobacco is an important industry in the State. The average price paid for the crop of 1899 in bundles, unsorted, is from 6½ to 6¾ cents per pound. The warehouse expenses for labor in sorting, packing, etc., and for shrinkage, is about 1 cent per pound; other expenses for boxing, drayage, insurance, etc., until placed on board cars for shipment is ½ cent per pound, making the total cost on board cars 8 to 8¼ cents per pound.

Most of the Wisconsin tobacco is used for binders. An interesting fact connected with Wisconsin tobacco is that it is said on good authority to contain a much smaller percentage of nicotine than almost any other kind.

Purchasers here are usually agents for large tobacco dealers in Chicago, New York, and other large cities, and on orders from them ship directly to manufacturers throughout the Union and to Europe. Some hundreds of orders looked over show that practically every city and large town in the Union buys from this market. Local cigar factories pay for this tobacco 10, 15, or 18 cents per pound, according to grade. Some of the leading tobacco markets in this State are Madison, Stoughton, Janesville, Deerfield, Edgerton, Evansville, and Brooklyn.

There are no facilities for cold storage in Madison.

Statistical results for 15 products.—The statistical results of the inquiry made at Madison, Wis., are given herewith. They embody the leading kinds of produce, classed as fruits and vegetables, with dairy products, poultry, oats, corn, and hay. Most of the consumers' prices given are taken from records of household expenditures kept by individuals. The producers' prices are farm prices, and the difference in expense of distribution through retailers and directly from farmer to family is indicated.

Prices and expenses of distribution in Madison, Wis.

Year and month of sale.	Kind and grade of product.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.	Remarks.
					Per cent.	*Per cent.*	
Through year 1899-1900	Milk	5 cents per quart	5 cents per quart			100	Retailers produce own milk.
June, July, Aug.	do	do	2 cents per quart	3 cents per quart	60	40	Retailers buy from producers under contract.
Sept. to May, inclusive.	do	do	2½ cents per quart	2 cents per quart	50	50	
Through year	do	90 cents per 100 pounds	90 cents per 100 pounds			100	Creameries buy of farmers.
	Butter	25 cents per pound	25 cents per pound			100	Creameries to regular customers.
Jan., 1900	do	32 cents per pound					Creameries through retailers.
Through year	do	22½ cents per pound	22½ cents per pound			100	Farmers to consumers direct.
Average through year.	Cheese	17 cents per pound	10½ cents per pound	6½ cents per pound	38	62	Through wholesale and retail dealers.
May, 1900	Eggs	11 cents per dozen.	10 cents per dozen	1 cent per dozen	9	91	Through retail dealers.
	do	10 cents per dozen	do			100	Direct to consumers.
	Chickens	15 cents per pound	9⅓ cents per pound	5¾ cents per pound	38	62	Through retail meat market.
	Potatoes, new	45 cents a peck	$3.75 per barrel	$1.20 per barrel	25	75	Louisiana through wholesaler.
Jan. to May, 1900	Potatoes, native	40 cents per bushel	30 cents per bushel	10 cents per bushel	25	75	Through retailers.
May	Apples	$3.85 per barrel	$2 per barrel	$1.85 per barrel	48	52	Apples from Central States and New York.
	do	$6.50 per barrel	$3.50 per barrel	$3 per barrel	46	54	California apples.
	Strawberries	12½ cents per box	$2.25 per case	75 cents per case	25	75	Imports berries.
June	do	15 cents per box	12 cents per box	3 cents per box	20	80	Home grown.
May	Onions	7 cents per pound	$2 per bushel	$1.99 per bushel	49	51	Bermuda.
Average through year.	do	5 cents per pound	3 cents per pound	2 cents per pound	40	60	Native.
Season 1899	Melons[1]				20	80	Home grown.
May, 1900	Cabbage	5 cents per pound	4 cents per pound	1 cent per pound	20	80	Do.
Through year	Hay	$5.50 per ton	$5.50 per ton			100	Natural grass.
	do	$8 per ton	$8 per ton			100	Timothy.
	Oats	23 cents per bushel	23 cents per bushel			100	Consumers pay a little over general market prices for corn and oats throughout the year.
	Corn	30 cents per bushel	30 cents per bushel			100	

[1] Prices depend on size.

11. MARKETS FOR PRODUCE IN LINCOLN, NEBR.[1]

(1) *General features of the Lincoln market.*—The city of Lincoln, the capital of Nebraska and the county seat of a large and rich agricultural county, is supplied with agricultural products, in the main, from the immediate neighborhood. Thirteen lines of railroad radiate into the surrounding country, but comparatively little farm produce is brought in by them. For the most part the city is supplied by the farmers, who come in with their own conveyances over the country roads.

It is stated by railroad officials that the only important farm products they bring into Lincoln are hay, potatoes, fruit, and some vegetables brought from distant places. There is some trade in eggs and butter, but it is difficult to separate the local trade in these articles from the trade of the commission houses with Eastern markets. The grocers call upon the jobbers for eggs when the local supply is scarce, but this demand is limited in volume. Country butter is shipped in to the commission houses for storage and to be worked over, but this likewise is intended for other markets, and is not sold here except when the local dealers are short of their regular supplies. Fruit comes to the city in wagons and also by rail. It is a common practice to load wagons with apples in the southeastern part of the State and drive to Lincoln, selling the fruit on the streets here in competition with that brought by rail and sold through the regular trade channels. Hay is brought in by the farmers and sold on the hay-market square directly to the consumer, but the quantity raised within "hauling distance" is not great enough to supply the demand, and about 3,000 tons are shipped in by railroad every year. Potatoes are raised in the neighborhood, but so unstable is the output that distant fields are frequently called upon, Colorado and northwestern Nebraska furnishing a large part of the supply.

The uncertainties of this trade may be judged from the fact that one dealer shipped potatoes last season from a number of points between Minneapolis, Minn., and the Indian Territory early in the season, and later was a larger shipper from this market to other points that reported a failure of the crop.

The vegetable market is also wholly dependent upon the season, and no figures can be given that can be considered to represent a fair average of conditions. Thus, in the early spring all kinds of vegetables will be shipped in from the Southern States. Later, they come from Kansas, Missouri, and southern Nebraska. In May the local gardens begin furnishing the supply, and instead of shipping in vegetables the local commission dealers may be handling none at all, or if they are doing anything it may be shipping some of the surplus product out. Late in the season the supplies may again be brought from distant points to the North.

There are 6 wholesale commission houses in Lincoln that deal on a large scale in produce and fruit. They in turn sell to about 100 local grocers and nearly the same number of retail feed stores. The part of the retail price of each product that goes to the producer and the amount that goes to the middleman and the transportation companies will be found as nearly as it can be ascertained in the following tables.

(2) *Expenses of marketing milk.*—Milk is sold in Lincoln from "milk depots" and wagons that make regular deliveries to the houses. The price is uniform the year round except in occasional seasons of scarcity. It is 5 cents per gallon. The sellers, as a rule, have their own cows; some of them buy milk from their neighbors. They pay about the retail price, but make their profit in extracting a part of the cream before selling it. No milk comes in by rail.

(3) *Expenses of marketing eggs.*—These are mostly sold directly to the retailers by the producers. Only in times of a short supply do the retailers buy of the commission houses. Generally eggs are retailed at about the same price paid for them, and the retailer makes his profit in buying them in trade and the profit on the goods traded. When they are paid for in cash the dealers expect to make 1 cent per dozen. The commission houses expect to make 1 cent per dozen on those they sell to the retailer.

(4) *Expenses of marketing butter.*—Country butter: Most of this is sold by the producer to the retailers who pay for it in trade and expect to make their profit on the goods traded and who retail it for nearly the same price they pay. When it is bought directly the retailer expects to make from 1 to 2 cents per pound. A considerable quantity is sold by the producer directly to the consumer at a uniform price for the year, which ranges from 20 to 25 cents per pound.

Creamery butter: As the market is supplied largely by a large local creamery but little is brought in from outside. The price is set by the local creamery, and the question of transportation does not enter. The retailers buy from the creamery at from 20 to 24 cents the year round, and make from 2 to 4 cents per pound on it.

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[1] Reported by Mr. Will Owen Jones, special agent, Lincoln, Nebr.

(5) *Expenses of marketing potatoes.*—Only once in 10 years has the local supply filled the demand. This was last year, when potatoes were gathered up here by the commission houses and shipped to other points. This, however, was not until after the new crop was harvested. Wherever a surplus exists local merchants buy the product of the producers and sell to the commission men who come and bid for it. To-day, for example, potatoes retail in Lincoln for 20 cents a peck or 80 cents a bushel. The 80 cents is divided about as follows:

	Cents.
Retailer's profit	20
Wholesaler's profit	10
Railroad freight	18
Seller's commission	7
Net price to producer	25

The proportion of the cost by consumers going to distributors is 69 per cent; and to producers, 31 per cent.

The only fixed item in this list is the railroad freight. This remains constant, no matter what the price of the potatoes may be. It is 18 cents from Minneapolis, 15 cents from Gordon, Nebr., representing points in northwestern Nebraska, 15 cents from Colorado, and 20 cents from the Indian Territory.

The amount consumed is about 1 car a day the year round. The prevailing price last July was about 50 to 55 cents to the jobber. Last January, owing to the fact that no freight was added, the home market being supplied by neighboring farmers, the jobbers paid only 20 cents.

(6) *Expense of marketing vegetables.*—Vegetables are imported from Texas and Missouri mostly by commission men who sell to the retailers. The commission men make a profit of 10 per cent, and the retailer another profit of 10 per cent. Local produce is sold directly to the retailers, who expect to make 10 or 15 per cent. Quite a good deal is sold directly to the consumers by the producers at practically the same price at which the retailers sell.

It is impossible to say anything more definite about prices, as that depends on both the condition of the local crop and the crop in the shipping places.

The consumer pays 10 or 15 per cent more than the producer gets of the local crop, except where it is sold directly to the consumer. There is no combination that fixes prices.

Vegetables are shipped into Lincoln from all directions when there is a scarcity here and there is a glut anywhere else. The commission men say that the movement is always regulated by the one question of supply and demand, and freight rates. On perishable freight it is necessary to guarantee the freight in advance. The growers of cabbages, melons, or other products in the South or in California send their goods to the commission men here to be sold at the prevailing market price. The commission men receive from 8 to 10 per cent as their share. They then pay the freight and remit the remainder to the producer.

An examination of the accounts of a prominent house in Lincoln reveals the fact that as a rule the producer receives just about as much as the railroads do for carrying his stuff to market. When vegetables are low, the producer often receives less than the railroads. Taking the figures furnished by half a dozen commission houses and working down to the producer's share, I was struck with the fact that in oranges, lemons, potatoes, and many vegetables the freight charges are almost identical with the producer's share. That is, the producer and the railroads divide the amount received from the jobber about equally.

(7) *Expenses of marketing oranges and lemons.*—This market is supplied mainly from California. The price last July was $4 a box. In January last it was $2.50 to $2.75 a box. On June 18, 1900, the prices paid per box were as follows:

Consumer	$4.50
Retailer	3.75
Jobber	2.25
Freight	1.10
Commissions, packing, etc., in California	1.25
Amount left for producer	1.00

Proportion of consumer's cost to distributers, 78 per cent; to producers, 22 per cent.

Lincoln dealers say that there is no combination of any kind at this end of the line for regulating the price. They do say, however, that the goods must all come through on fruit refrigerator cars, and that a strong combination exists between the two principal companies that keeps up the price and exercises some sort of control over the shippers in California.

The lemons on this market come mainly from California. The going price last July was $4 and $4.50 a box. In January it was $2.50 to $2.75. On June 18, 1900, the money involved in handling a box of lemons on this market was as follows:

Consumer pays	$6.00
Retailer pays	4.50
Jobber pays	2.50
Freight	1.25
Packing, commissions, etc., in California	1.25
Producer receives	1.25

Proportion of consumer's cost to distributers, 80 per cent; to producers, 20 per cent.

The same remarks as to combinations and refrigerator cars apply as to oranges.

(8) *Expenses of marketing hay.*—The price depends entirely on the crop. No combination to affect prices exists: $6.50 per ton is an average for the year. The highest price is in May—$9—this year; about $6 in January and July.

Hay is shipped from the Platte Valley, Elkhorn Valley (Holt County), and eastern Kansas. Freight is $1 per ton from Platte Valley, and $1.40 from other points. Baling costs $1 per ton.

The quantity received is about 3 cars of 10 tons each per day. The commission is 50 cents per ton. Hay is mostly sold directly to dealers, who make $1 per ton.

SUMMARY.

	Per ton.
(1) Average price to consumer	$6.50
(2) Distribution:	
Retailer	.50
Wholesaler	1.00
Baling	1.00
Transportation	1.00
(3) Producer	3.00

Proportion of consumer's cost paid to distributers, 54 per cent; to producers, 46 per cent.

12. WICHITA, KANS., AS A FARM MARKET.[1]

(1) *General features.*—Kansas is a State of numerous smaller cities and towns. On this account the market supply is largely local in its origin, but the shipping of surplus products, such as cheese and grapes, has made noteworthy progress. As a center for the receipt of other farm products, the position of Wichita is indicated by the following features in its organization. It has a population of, approximately, 25,000.

The number of commission merchants in live stock is 5; creameries, 2; wholesale produce houses, 18; wholesale and retail feed dealers, 12; licensed peddlers of farm products, 6.

There are no farm products sold here on commission, except strawberries, and the commission on them is 10 per cent. There is a grape growers' association here, organized for the purpose of selling their product. The president says the result of same has been to get better prices for their grapes. Their method is to put all of their crop together and have one man go with it to the market and sell it. The crop raised here is shipped mostly to Colorado. This is the only producer's organization here.

The main shipping points for milk are within a radius of 60 miles of Wichita, in Kansas; average freight rate, 2 cents per gallon. Main points from which oranges come are California and Mexico, and the rate of freight is $1.25 per 100 pounds. Main point from which onions are received is Colorado; rate, 35 cents per 100 pounds. Poultry comes from within 100 miles of Wichita; average rate, 30 cents per 100 pounds. Cabbages come from Colorado and Wisconsin, at 30 and 40 cents per 100 pounds. Strawberries from Missouri and Arkansas; rate, $1 per 100 pounds. The other products are hauled in wagon lots and come from very many other places.

The farmers' hauling distance is an average of 15 miles. About the only product which the farmers supply direct to the consumer to any extent is milk. The farmers sell the other products mostly to wholesalers and retailers.

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[1] Reported by Mr. Dean Gordon, special agent, Wichita, Kans.

There are no producers' combinations here, except the grape organization mentioned above.

There is no milk inspection here or license system and no milk combination; the consumers are supplied wholly by country milk routes, of which there are from 15 to 20. The shipped-in milk is all used by the creameries for the manufacture of butter, etc.

There are no market places here, except a hay square for farmers to stand with their hay wagons.

There is only one cold-storage plant here, and it is not in operation now. It was not a financial success.

(2) *The statistical results for 16 products.*—The statistical results are given below, showing prices of products and differences between what the producer receives and the consumer pays, which differences represent the middlemen's expenses and profits.

Prices and expenses of distribution in Wichita, Kans.

Year and month of sale.	Kind and grade of product.	Consumer paid—	Producer received—	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.
					Per cent.	*Per cent.*
Average for year from July, 1899, to July, 1900.	Sweet milk	15 cents per gallon.	6 cents per gallon.	9 cents per gallon.	[1] 60	[1] 40
	Butter	27½ cents per pound.	15 cents per pound.	12½ cents per pound.	45	55
	Cheese	20 cents per pound.	10 cents per pound.	10 cents per pound.	50	50
	Oranges	$5 per crate	$2.50 per crate	$2.50 per crate.	50	50
	Apples	$5 per barrel	$2 per barrel	$3 per barrel	60	40
	Onions	2 cents per pound	1 cent per pound	1 cent per pound.	50	50
	Live poultry	7 cents per pound	4 cents per pound	3 cents per pound.	42.8	57.2
	Dressed poultry	9 cents per pound	5 cents per pound	4 cents per pound.	44.4	55.6
	Eggs	15 cents per dozen.	11 cents per dozen.	4 cents per dozen.	26.7	73.3
	Potatoes	80 cents per bushel.	40 cents per bushel.	40 cents per bushel.	50	50
	Cabbage	2½ cents per head.	1 cent per head.	1½ cents per head.	60	40
	Watermelons	10 cents each	6 cents each	4 cents each	40	60
	Strawberries	$2 per crate 24 quarts.	$1.25 per crate	75 cents per crate.	37.5	62.5
	Hay	$7 per ton	$4 per ton	$3 per ton	42.8	57.2
	Corn	36 cents per bushel.	26 cents per bushel.	10 cents per bushel.	27.8	72.2
	Oats	35 cents per bushel.	25 cents per bushel.	do	28.6	71.4

[1] Milk is bought in large quantities and sold at houses by the pint at 3 to 5 cents per pint.

REMARKS—The difference between what producer gets and consumer pays includes freight and all other expenses of handling. None of these commodities are handled here on commission, except in occasional instances. The prices are the average for the year, as near as the dealers could give them to us. This is as near accurate as we can get it.

13. FARM MARKETS AT PORTLAND, OREG.

(1) *Portland's position in the Pacific trade.*[1]—With a population of nearly 100,000, Portland is the leading commercial city on the northern Pacific coast. Like Seattle and Tacoma, it has developed rapidly as a distributing market within recent years. The grain receipts have grown enormously. A recent shipment of 82,000 bushels of wheat from Portland, Oreg., to Yokohama, Japan, was the first cargo made up exclusively of this cereal that ever crossed the Pacific to Japan.

In other respects this market shows a rapidly developing demand for farm products. The vast increase of ocean trade, trade with China, Japan, Hawaii, Philippines, and Alaska, as well as inland with the near-by mines, has, for example, created a demand for condensed milk, as shown by the amount brought from the East. Many districts are to be found here where this industry could be introduced without fear of a successful competitor. It is predicted that it will not be long before the milk-condensing business will be one of our very best-paying local industries. Canned vegetables have likewise become a prominent part of this trade, thus creating a new local demand on farm resources.

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[1] Reported by Mr. E. W. Wright, special agent, Portland, Oreg.

(2) *Internal organization of the local market.*—The internal organization of the local market is described in the data given below.

There are 35 commission houses and wholesale dealers in farm products, the wholesalers doing a commission business and the commission men a wholesale business, so that they can not well be separated into two classes. There are also 13 wholesale dealers in grain exclusively, the regular commission houses seldom handling grain. There are 195 retail dealers in farm products.

There are 71 peddlers of farm products with wagons and 11 with baskets licensed by the city, the former paying $15 per quarter and the latter $10 per quarter. Basket peddlers are all Chinese gardeners, who peddle their own product in huge baskets suspended from a pole across their shoulders.

Commission rates are given with the different articles handled elsewhere. Regarding organization by farmers nothing of importance has ever been done. A few fruit growers have occasionally joined together, but never in sufficient numbers to affect prices, or with system enough to hold together for even a single season. The nearest thing to a complete organization of farmers is the hop combine, mentioned under the head of hops.

There are no public or private market places in the city where the farmer and dealer or consumer are brought together, except in the case of berry growers, who generally congregate on a side street about 4 a. m. during the season. Other products are hawked about by the grower unless, as is sometimes the case, special arrangements are made for the delivery by grower direct to certain stores. In the case of fruit, if there are any "left-over" stocks which are not disposed of on the street, they are sold to canneries at one-half to one-third the price paid by the retailer, the stock of this nature, of course, being "culls."

(3) *Statistical results for 12 products.*—The statistical results of this inquiry include 12 leading articles of household consumption, followed in each case with explanations of the conditions under which trade is carried on, the sources of supply, and the rates of transportation.

Prices and expenses of distribution in Portland, Oreg.

MILK.

Year and month of sale.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.
				Per cent.	*Per cent.*
July, 1899	5 cents per quart	2 cents per quart ...	3 cents per quart	60	40
Jan., 1900	6½ cents per quart ...	3 cents per quart ...	3½ cents per quart	53.84	46.16

The milk trade of this city is handled in a very crude and expensive manner. Approximately 85 per cent of the consumers receive their supply direct from the producer who peddles it over the city by team. There is no attempt at system or at dividing territory so that customers may be found in the same neighborhood, and by such a disorganized method it is not an infrequent occurrence to find 6 or 8 different milkmen delivering in the same block. Much greater equipment is required to handle the business in this way, and there are engaged in the business 175 milk vehicles, ranging from a 1-horse cart with 10 or 12 gallons to big 2-horse wagons carrying over 100 gallons each. These milk peddlers live within a radius of 12 miles of Portland, the greater number coming not farther than 5 to 8 miles. As to the supply not received in this way, the bulk of it comes by boat from dairy ranches along the Columbia and Willamette rivers. It is carried by boat for a distance of 10 to 50 miles, at 10 cents per can of 10 gallons. A limited amount comes by rail from Willamette Valley points on the Southern Pacific at the same rate. For this milk the producer is paid 2 cents per quart from February 1 to August 1, and 3 cents per quart from August 1 to February 1. The percentage of milk received in this way is so small that there is not much semblance of competition between the men handling it and the producers who deal direct with the consumer. Among the latter class there is frequently a mild competition, but never a combination strong enough to accomplish anything, there being too many men engaged to make it possible. There is no inspection service and the wagon men are not required to pay a license.

Prices and expenses of distribution in Portland, Oreg.

BUTTER.

Year and month of sale.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.
				Per cent.	*Per cent.*
July, 1899	20 cents per pound ..	13⅞ cents per pound.	6⅛ cents per pound ...	30.83	69.17
Jan., 1900	30 cents per pound ..	23⅞ cents per pound.	.....do	20.55	79.45

Butter for the Portland market is received from creameries in the Willamette Valley, Columbia River bottoms, and Tillamook on the Oregon coast. From the latter point it is carried by ocean steamer 40 miles to Astoria, thence by river steamer 100 miles to Portland, the freight amounting to 30 cents per 100 pounds. From the Willamette Valley the bulk of the receipts come from Corvallis by Southern Pacific Railroad or Willamette River boat, at 20 to 25 cents per 100 pounds, freight; from Albany and Eugene, on the Southern Pacific Railroad, at 28 and 42 cents per 100 pounds, respectively. Country creameries which use more than the products of their own herds purchase butter fat from the dairymen, paying per pound for same 85 per cent of the quotable price per pound of best creamery butter in the Portland market. Local creameries in Portland pay the same price, receiving butter fat in cans at the same freight rate as paid for milk. The commission merchants who handle the butter make a charge of 5 per cent for same, and the general profit exacted by the retail dealer is 15 cents per pound. Cold-storage rates on butter are 1 cent per pound for the season. Butter storage capacity of the city is about 750,000 pounds.

Prices and expenses of distribution in Portland, Oreg.

EGGS.

Year and month of sale.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumers' price to distributers.	Percentage of consumers' price to producers.
				Per cent.	*Per cent.*
July, 1899	17½ cents per dozen..	14¼ cents per dozen.	3¼ cents per dozen....	18.57	81.43
Jan., 1900	22½ cents per dozen..	18¼ cents per dozen.	4¼ cents per dozen....	18.89	81.11

The egg as a factor in commerce is not seriously regarded in Oregon, and except in a few instances where poultry growers have made a specialty of the egg business, the city of Portland is supplied (through commission merchants) by the country merchants, who exchange their merchandise for eggs, allowing the producer the Portland price, less freight and commission. The Willamette Valley farmers all keep enough chickens around the farm to enable them to have a surplus of eggs, and in the aggregate the production is nearly equal to the demand. The average price for the year has been greatly increased within the past 2 years by facilities for cold storage. The cold-storage plants take the surplus off the market when the price sinks too low, and turns it out again when the scarcity brings satisfactory prices. Albany, 80 miles from Portland, rate 28 cents per 100 pounds, and Eugene, 123 miles from Portland, are among the principal shipping points. Dayton, on the Yamhill River, and Corvallis, on the Willamette River, are also good shippers of eggs. The loss in handling is insignificant. Country merchants handle closely before shipping, and transportation lines in most cases absorb the loss by breakage. Portland commission merchants charge 5 per cent for selling, and retailers' profits are from 1 to 3 cents per dozen, according to price. Cold-storage charges are 2 cents per dozen for the season from 6 to 10 months.

Prices and expenses of distribution in Portland, Oreg.

CHEESE.

Year and month of sale.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumers' price to distributers.	Percentage of consumers' price to producers.
				Per cent.	*Per cent.*
July, 1899	14 cents per pound...	10⅕ cents per pound.	3⅘ cents per pound ...	27.15	72.85
Jan., 1900	16 cents per pound...	12⅕ cents per pound.	.....do	23.75	76.25

Portland's supply of cheese is drawn from practically the same points as those from which the stocks of butter are received, Tillamook, on the Oregon coast, being one of the heaviest shippers. The product of the factories is handled in almost identically the same manner as is butter, freight rates being the same and the charges of the commission men the same. Aside from Tillamook and the Willamette Valley points mentioned as shippers of butter, the most prominent cheese shipper to the Portland market is Woodland, Wash., on the Lewis River, a tributary of the Columbia; distance, 35 miles; freight, 15 cents per 100 pounds.

Prices and expenses of distribution in Portland, Oreg.

LIVE CHICKENS.

Year and month of sale.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.
				Per cent.	*Per cent.*
July, 1900	$6 per dozen.........	$4.02½ per dozen....	$1.97½ per dozen......	32.90	67.10
Jan., 1900	$7.20 per dozen......	$4.97½ per dozen....	$2.22½ per dozen......	30.6	69.4

Nearly all of Portland's supply of poultry is received from points along the line of the Southern Pacific in the Willamette Valley. The heaviest receipts come from southern Oregon—Roseburg, Drain, Yoncalla, Oakland, Goshen, Eugene, and Albany being good shippers. From Yoncalla, Oreg., the freight on live chickens is 55 cents per 100, the distance being 166 miles, and from Roseburg it is 60 cents per 100 pounds. From valley points closer in the freight declines to 20 and 30 cents per 100, river competition being met at Albany, distance 80 miles. Chickens are shipped in crates holding from 2 dozen to 4 dozen each, and in billing them the crates are usually taken by measurement, so that the average freight rate on all receipts will be about 25 cents per dozen. They are seldom sold by the pound, but go to the retailer by the dozen and are dressed by him and sold to the consumer by the bird, the profit averaging about $1.50 per dozen for handling. The commission houses supply crates and charge 5 per cent for selling. Ducks, geese, and turkeys are received from the same points as chickens, and are handled in the same manner, prices bearing the same proportion to those of chickens as they do in all other markets.

Prices and expenses of distribution in Portland, Oreg.

DRESSED CHICKENS.

Year and month of sale.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.
				Per cent.	*Per cent.*
July, 1899	12½ cents per pound .	9 cents per pound ..	3½ cents per pound ...	28	72
Jan., 1900	14 cents per pound ..	9.95 cents per pound	4.05 cents pound	29.9	71.1

But a comparatively small amount of dressed chickens is received in Portland, dealers preferring to buy the stock live and dress it. Those which are sold come from the same points mentioned above as shippers of live poultry and take the same freight rate. They are also sold at the same rate of commission. The exception to the rule regarding dressed poultry is turkeys, which are nearly all sent in dressed ready for the consumer. They are handled on commission, and usually sell at 3 cents to 5 cents higher than dressed chickens.

Prices and expenses of distribution in Portland, Oreg.

POTATOES.

Year and month of sale.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.
				Per cent.	*Per cent.*
July, 1899....	$2 per cental.........	$1.51 per cental.....	49 cents per cental....	24.50	75.50
Jan., 1900....	$1 per cental.........	61 cents per cental..	39 cents per cental....	39	61

The price given on potatoes, as above, for July, 1899, is unusual, and the price given for January, 1900, would be a fair average quotation extending over a number of years. The bulk of the best potatoes consumed in the Portland markets are produced on farms along the Cowlitz River, in Washington, distant about 50 miles from Portland. Potatoes are shipped from these points to Portland, a distance of about 50 miles, by river steamers, at a cost of 10 cents per 100 pounds. Another leading source of supply is Fishers Landing, Washington, distant from Portland 30 miles, with a river-steamboat rate of 10 cents per 100 pounds. There are also large quantities of potatoes produced throughout the Willamette River Valley, and as the larger proportion of them are tributary to both Willamette River boats and the Southern Pacific Railroad, they take a low freight rate, the average cost per cental being about 10 cents. The commission men charge 5 per cent for selling the potatoes, and the burlap sacks in which they are handled cost on an average 5 cents each. The retailer's profit ranges from 10 and 15 cents per sack when they are extremely low up to 25 and 30 cents when they are high.

Prices and expenses of distribution in Portland, Oreg.

ONIONS.

Year and month of sale.	Producer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.
				Per cent.	*Per cent.*
July, 1899....	$1 per cental.........	61 cents per cental..	39 cents per cental ...	39	61
Jan., 1900....	$2 per cental.........	$1.46 per cental.....	54 cents per cental...	27	73

Onions are handled by very much the same methods as potatoes, being sold on practically the same margin of profit by the retailer and on the same commission rate by the jobber, the retailer asking an increased percentage of profit over potatoes only when prices are excessively high and the onions are retailed in smaller lots. The largest supply point on onions for the Portland market is Beaverton, Oreg., distant 11 miles, with a freight rate of $1 per 1,000 pounds. Another point of about equal importance is Sherwood, Oreg., distant 17 miles, with the same freight rate as Beaverton. Burlap sacks of same grade and price as those used for potatoes are used in handling onions.

Prices and expenses of distribution in Portland, Oreg.

APPLES.

Year and month of sale.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.
				Per cent.	*Per cent.*
Jan., 1900	$1.30 per box	72 cents per box	58 cents per box	44.60	55.40

The principal points from which apples are received for the Portland market are Hood River, Roseburg, Ashland, and Medford. Coos bay ports on the Oregon coast are also good apple shippers. Rates from Hood River, 66 miles distant, are 10 cents per box by Oregon Railroad and Navigation Company, and by river steamer the fruit is sometimes carried as low as 5 cents per box. From southern Oregon points the rate is 20 to 25 cents per box, and from Willamette Valley points tributary to the river 10 cents per box. Figured in the above cost of distribution is the box, which costs 8 cents each. This box is the unit of measure in general use in the Pacific northwest and has a capacity about one-third that of the standard apple barrel of the middle West. The retailer's profit on apples at the price quoted is about 30 cents per box, and the commission houses charge 5 per cent for selling.

Prices and expenses of distribution in Portland, Oreg.

STRAWBERRIES.

Year and month of sale.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.
				Per cent.	*Per cent.*
July, 1899	5 cents per pound	2½ cents per pound	2½ cents per pound	50	50

A considerable portion of the strawberries consumed in the Portland market are sold direct by the producer to the retail dealer, thus saving the commission charges and also the freight, the fruit in such cases being brought from near-by farms by wagon. Outside of this stock, the bulk of the receipts are from The Dalles, Hood River, and Roseburg, Oreg. From The Dalles, distant 88 miles, the express charges are 10 cents per crate containing 24 pounds. From Roseburg, 197 miles from Portland, the rate is 20 cents per crate. These are the two principal points outside of the territory adjoining Portland. The crate with the small boxes it contains costs 15 cents and is figured in the cost of distribution. There is a charge of 5 per cent for selling the berries and the retailers exact a profit of 1 cent per pound. The cost of picking, which is not included in the above, is from ½ to 1 cent per pound, according to the variety of the berry and the location of the patch.

Prices and expenses of distribution in Portland, Oreg.

CABBAGE.

Year and month of sale.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.
				Per cent.	*Per cent.*
Aug., 1899	$1 per cental	80 cents per cental	20 cents per cental	20	80
Jan., 1900	$1.50 per cental	$1.25 per cental	25 cents per cental	16⅔	83⅓

The cabbage consumed in this city, with the exception of what is received from California, is nearly all produced within a few miles of the city and is delivered direct to the retailers by the growers themselves in much the same manner as strawberries and similar small fruits are delivered. As the Oregon cabbage is not fairly in the market much before August, I have selected that month as showing the lowest price reached by the product during the year. In the spring and early summer Portland consumes large quantities of cabbage, which are brought here from California, but as I did not think that business was germane to the inquiry, I have not touched on it. The growers in this vicinity drive in from distances of from 2 to 10 miles, and some large producers come from Vancouver, Wash., across the Columbia River, a distance of 6 miles. As all of the delivering is done with their own teams, the only element in the cost of distribution which can be considered is that of the retailers' profit, which is usually 25 cents per cental whenever the price of the commodity gets above $1 per cental and 20 cents per cental when it falls below $1 per cental.

Prices and expenses of distribution in Portland, Oreg.

WATERMELONS.

Year and month of sale.	Consumer paid.	Producer received.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.
				Per cent.	*Per cent.*
Aug., 1899	$3 per dozen	60 cents per dozen	$2.40 per dozen	80	20

Watermelons for the Portland market are received in carload lots from Grants Pass, Oreg., and Payette, Idaho. They come in a small way from a number of other points, but as the bulk of the receipts are from the two points named, they serve as the best examples for the case in point. The rate from Payette, Idaho, via Oregon Railroad and Navigation Company and Oregon Short Line Railroad, a distance of 440 miles, is $75 per car, and the rate from Grants Pass, Oreg., by way of the Southern Pacific Railroad, a distance of 296 miles, is $65 per car. The melons are generally sold at the railroad station where they are grown, and the average price for the season is $60 per car, net, to the grower. The cars contain 100 dozen melons. The retailer handles them at a profit of $1 per dozen, and the average freight rate is 70 cents per dozen. This leaves 70 cents per dozen profit for the wholesaler, out of which must be disbursed cartage from train to store and to retailer, loss by spoiling and breakage in handling, and of crating for reshipment. It is impossible to segregate these items to a nicety, as they vary greatly on account of the bulky nature of the commodity handled, and also because the market is largely subject to the weather, a continued cold, wet spell in the height of the season frequently causing the loss of entire carloads. At such times wholesalers crate the melons and ship them in all directions where there is a possibility of their being sold, but seldom dispose of all of the surplus without a loss. Under such circumstances selling on a commission basis can never be satisfactory, and it is difficult to figure out just what portion of the 70 cents to the wholesaler is actual profit and what is consumed in the incidental losses mentioned. The leading dealers, however, assert that they would be well pleased to realize a net profit of 25 cents per dozen throughout the season.

PART ELEVENTH.

THE MILK TRADE IN CITIES AND TOWNS.

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1. EXTENT OF THIS INQUIRY.

This agency made some inquiries into the milk trade in several of the largest cities in the United States, namely, New York, Philadelphia, Boston, Chicago, St. Louis, and San Francisco. In all of these it found a higher degree of organization among city dealers than among country producers. In the case of Boston 7 wholesale milk firms practically control 75 per cent of the milk trade in the city by contracts with producers in the 6 New England States. Ninety per cent of the milk coming to Greater New York is bought and sold on the basis of the price announced by the Consolidated Milk Exchange. The Philadelphia Milk Exchange serves a similar purpose. The Chicago Milk Shippers' Union is a less pretentious organization, but agrees upon prices to the trade in advance, subject to changes required to preserve or restore equilibrium between demand and supply.[1] In the course of the year 1898 the exchange price to producers of milk in New York changed ten times, varying from 1¾ cents per quart in June—the lowest on record in 30 years—to 3 cents in December. The exchange price is the supply price—the price at which a country supply adequate to meet the demands of city consumers will be forthcoming. Being fixed by distributers, it is not always a paying price, as in the case of the Chicago union price of June and July, 1899, when it fell so far below the cost of production and transportation as to create a deficit in August. As a rule, however, the price proposed by the directories of these organizations of dealers represents so thorough an acquaintance with the facts in the milk situation as fairly to anticipate the course of the trade.

The milk trade of our largest American cities is a marvel of promptness and regularity. Within from 24 to 36 hours from milking a supply arrives and is consumed, so that milk is seldom more than 30 hours old before it has passed from the initial producer through the market and been consumed. This process often involves transportation over hundreds of miles of railroad at a high rate of speed in trains of refrigerator cars expressly made for the purpose of bringing the product to the market in the best of condition. No extra charge is made for the use of refrigerator cars in the milk service of railroads.

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[1] Reported by Dr. C. E. Peck, special agent, Chicago, Ill.

2. THE MILK SUPPLY OF NEW YORK CITY (WITH MAP).

This does not seem so marvelous until the volume of the milk traffic is taken into account. Take New York City, for example, whose system of milk distribution is in some respects the most highly developed on this continent. In 1899 the receipts were almost 9,500,000 of 40-quart cans (9,489,134), coming in on 15 different transportation lines, the highest of which—the Delaware, Lackawanna and Western Railroad—carried 2,073,539 cans. This makes a daily average of 26,000 cans, or 1,040,000 quarts, per day throughout the year. If we reduce the condensed milk and cream to ordinary milk, the daily delivery in this city is 1,250,000 quarts. This amount is gathered from 5 States, some of it 300 miles away. Distribution of this daily requirement is made by 50 or more wholesale and retail milk dealers, whose capital rating varies from $3,000 to $1,000,000 by the mercantile agencies. Nineteen dealers represent nearly two-thirds of the capital in the business. A small proportion of these larger dealers own dairy farms from which they get part of their daily supply, but the greater quantity of milk is collected by companies which have depots in various dairying districts, and which buy from farmers and dairies.[1]

The companies are, in the case of New York, as a rule, large milk distributers in the city, which wholesale and retail at the same time. Some of the largest distributers not only follow both branches of the city milk trade, but also have their own dairy farms in the country from which they get a good part of their supply for their customers. This makes the dealers partly independent of the producing farmers, and is an important factor in keeping down the price of the other portion obtained by contract with farmers.

The forms of contract between dealers and farmers provide for inspection by the company's inspector and require the milk to be produced under prescribed conditions based on the "Fifty Dairy Rules" of the United States Department of Agriculture. The cows, the stables, the utensils, the feeding, and the handling of the milk on the farm, at the creamery, and delivery at the railway stations are all included in these regulations to which dealers bind producers. The standard quality required a minimum of 3 per cent of butter fat in the milk. A recent analysis by Dr. H. D. Chapin showed from 3.10 to 3.25 per cent of butter fat in 32 assays made of milk taken from the open market during the past fall and winter months in New York. Twenty-two gave 4 per cent and over, and 10 were slightly below 4 per cent. Four per cent is apparently a good average; and 75 per cent of the total consumption of milk is handled by the dealers represented in this analysis. Butter-bearing quality is therefore high.

These facts indicate the kind of influence which the standards of the market exercise on the process and conditions of production. The standards of the market are, however, the standards of the classes of consumers whose tastes the dealer is obliged to satisfy. The large hotels, for instance, and the expensive restaurants, which consume large quantities of milk daily, will tolerate no doubtful quality in their milk. With these the dealers take no risk. As a rule, the price paid by hotels allows a very small margin of profit, on account of the competition of dealers for this class of city trade. Yet the cost of handling by the 40-quart can is so much less than that of delivery by the quart to families, that the hotel trade is apt to be a good deal more profitable than the household trade. But the households, even of the poor, get the advantage of the standard enforced by the hotel trade. The effect of the whole community upon the producing standard is to increase the care involved in production, thus requiring an increased outlay of labor, time, and capital on the part of the producer.

These standards of quality have had very desirable effects upon distribution. They have gone far toward eliminating the producers and venders of milk substitutes and adulterations, by whom honest producers and ignorant consumers alike suffered in the not far past. There are still men who water milk; there are in use carefully guarded recipes for the purpose; but generally speaking the milk trade is one of which both producers and distributers may, thanks to scientific tests and official vigilance, be proud. The official report of the State inspector on the milk trade of New York State says:

"The milk produced in this State and shipped to the cities of New York and Brooklyn has shown but a very small per cent of adulteration, the cities now receiving, on an average, over a million quarts of milk a day. The quality is equal to that of any previous time, if not superior.

"A glance at a map of the territory from which the metropolitan division draws its milk is interesting. Long Island, Westchester, and Orange counties are generally known as the source of supply; but in these day, when special refrigerator cars have been built for carrying milk and cold-storage warehouses have been built at way stations for the preservation of milk transported by special fast milk express trains, the dealers reach out beyond the boundaries of our near-by counties and go to far-away Steuben, Herkimer, and Oneida counties. From the milking of a cow 200 or 300 miles away until the product reaches the consumer in New York 36 hours may elapse, but the milk arrives pure, cool, and sweet. Probably two-thirds of the milk used in the cities is about a day old when the consumer uses it, but owing to the cooling process, cold storage, and rapid transit it is in a perfect condition. It is not generally known that on Manhattan Island there were last year 361 cows kept in 128 stables, the largest herd being one at Kingsbridge of 43 cows, in good, healthy condition. Because of the attention given by the department of agriculture to the condition of the cattle through the State, there is a feeling of confidence that disease among cows is not so prevalent as it otherwise would be, and purer and healthier milk the result.

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[1] New York Times, February 24, 1900: New York Milk Supply.

"The wholesale and retail dealers in the cities have almost abandoned the practice of watering milk, which was so generally done in the past year. The present milk standard of our State has proved to be very satisfactory and equitable."[1]

During the months of July, August, and September an inspection of milk arriving over the different railroads and steamboats for consumption in New York and Brooklyn is usually made after the milk has been delivered by the common carriers to the grocers and peddlers at the terminal stations. The plan adopted is to obtain from the police department a detail of two or more officers for duty at each depot when inspections are made. With their assistance the wagons are formed in line as they come off the ferries or from the railroad depots into the streets. The milk is then inspected by samples as found on each wagon before allowing it to leave the line, one sealed sample being given to the dealer to make an independent analysis if he desires, the other sample being taken by the inspector.

The milk inspected when delivered by each railroad and steamboat line represents one day's shipment over each line for consumption in New York and Brooklyn, to which must be added 2,500 cans, estimated as the average per day by miscellaneous conveyances. During those months the results of these inspections showed, by the test applied, that only a small percentage had been adulterated.[2]

New York City has an estimated population of 3,500,000. It draws 83 per cent of its daily supply of milk from territory west of the Hudson, as far west as the line where the New York City demand comes into competition with the demands of Buffalo and Syracuse. On the east its daily demand comes into competition with Boston, Springfield, and New Haven. On the south and west within a circuit of 40 miles or more in New Jersey the numerous towns absorb more milk than is produced, and these too compete with New York for a supply from outside in northern New Jersey and in northeastern Pennsylvania along the line of the Lackawanna Railroad in the direction of Scranton, Pa., and Binghamton and Utica, N. Y. The five States of Massachusetts, Connecticut, New York, New Jersey, and Pennsylvania each furnish a material portion of the milk supply for New York City. Figuring at net exchange price with freight added, the value of the milk, cream, and condensed milk received in the New York market during May approximates $1,200,000, says the Milk Reporter. Of this, producers received about $800,000, the balance being accounted for by freight charges and discounts from net price.

(1) *Apportionment of consumers' cost between producers and distributers.*—There seems to be little doubt that it does not pay some farmers to sell milk at the price which the New York Milk Exchange has been paying. Yet the situation has been simply this, that the supply was no doubt forthcoming at the exchange rate and many farmers seemed to be losing money in furnishing that supply. The exchange price for milk at a given railway station within one of the milk-rate zones is given at 64 cents net for a 40-quart can, or 1⅗ cents per quart. The same milk sold in New York City for not less than 5 cents per quart and not more than 7 cents per quart to the consumer in the month of April or May. At this rate the retailer received from $2 to $2.80 per can from consumers. The difference between 64 cents and $2 or $2.80 is $1.36 or $2.14. Taking the lower figure, $1.36, as the basis, three-fourths of a cent per gallon, or 30 cents a can, must be deducted for freight to New York terminals, thus leaving $1.06 as the amount received for distribution from the Hoboken, Weehawken, or Jersey City terminals to the consumer in Greater New York.

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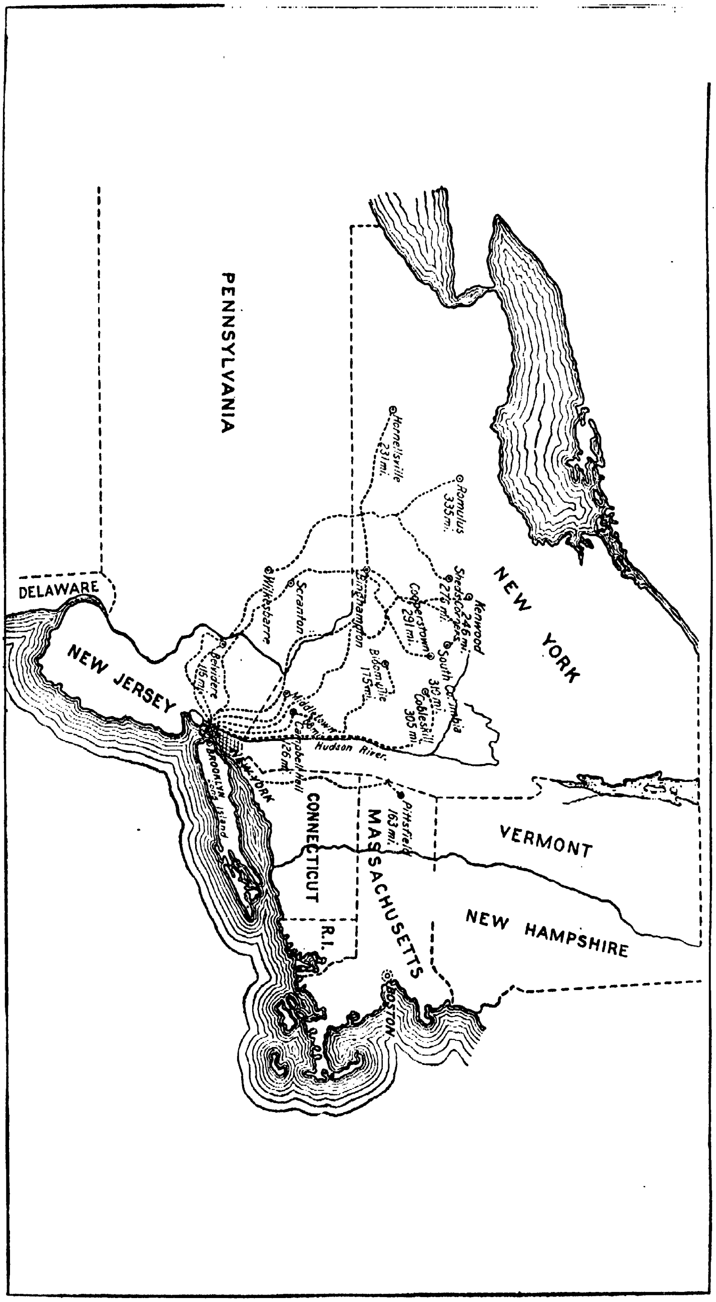
[1] New York State Department of Agriculture, 1898, vol. I, p. 207-208.

[2] Fifth Annual Report of the New York State Commissioner of Agriculture, p. 298.



Milk map showing territory from which milk supply of New York City is obtained. Drawn by H. Kaplan.

ing especial care in the matter of cleanliness. The time of delivery is from 12 to 36 hours after milking. Nine out of the 19 dealers say the tuberculin test has been applied to their herds, although not regularly. Three simply stated that there was oversight of the herd by a veterinarian. A few of these dealers owned the cows producing the milk, but the great quantity of milk is collected by companies who have depots in various dairy districts and who buy from farmers and dairies.

"These companies have regular forms of contracts. (See appendix for forms of contracts.) These contracts may allow the companies' inspectors to examine the cows, stables, and utensils, regulate the manner of feeding, handling of milk, etc., and sometimes even provide for notice to the company of any contagious disease in the family or help of the producer. The milk is brought to the depot at stated hours, cleaned, if necessary, and immediately bottled or canned, and shipped either in boxes containing ice or in refrigerator cars, and delivered within 24 to 36 hours after milking. About 75 per cent of the milk now received in this city comes from these receiving stations, or, as they are usually called, creameries.

"There is no doubt that milk handled in this large way is an improvement over the old plan of the various milk dealers receiving their supplies from numerous small independent dairies. A system of judicious control and oversight is likewise simplified. In order to learn the actual amount of butter fat contained in the milk supplied by our best dealers, 32 assays were made during the past fall and winter months of the milk purchased from these dealers in the open market. These assays showed the lowest proportion of butter fat to be 3.10 per cent, and the highest 5.25 per cent. Twenty-two of the assays showed 4 per cent and over, and the other 10 showed very close to 4 per cent, such as 3.52 and 3.66 per cent. From this it seems fair to conclude that milk containing 4 per cent of butter fat is a good average as supplied by first-class dealers in this city."

(6) *Statistical exhibit of New York milk trade.*—The following figures indicate the extent to which New York serves as a market for milk in its different forms:

New York yearly milk receipts by months, showing total number, also daily average cans of milk, cream, and condensed milk received in the New York market during 1899 and 1898.

[From the Milk Reporter.]

	Cans of milk, 40 quarts.		Cans of cream and condensed milk, 40 quarts.		Daily average milk.	
	1899.	1898.	1899.	1898.	1899.	1898.
January	710,850	679,125	21,980	17,914	22,931	21,907
February	638,799	638,435	21,401	18,483	22,814	22,801
March	714,585	738,396	26,025	22,828	24,019	23,819
April	746,327	703,395	31,562	25,259	24,877	23,446
May	823,396	759,293	45,857	35,024	26,561	24,493
June	862,143	776,493	55,828	44,476	28,738	25,883
July	848,420	819,964	49,272	45,921	27,368	26,450
August	784,585	777,044	44,519	41,511	25,309	25,066
September	741,311	761,437	32,909	33,645	24,711	25,381
October	743,701	749,765	30,621	25,968	23,990	24,186
November	717,066	718,629	26,857	23,808	23,902	23,954
December	715,219	707,829	25,873	22,495	23,072	22,833
Total	9,076,432	8,829,805	412,704	357,332	....	....
Daily average	21,867	21,191	1,131	979	....	....

	Daily average cream and condensed milk.		Average price.		Average price of butter.		Quarts equal price 1 pound butter.	
	1899.	1898.	1899.	1898.	1899.	1898.	1899.	1898.
			Cents.	*Cents.*	*Cents.*	*Cents.*		
January	709	578	2.75	2.75	19.75	20.4	7.2	7.4
February	761	660	2.50	2.60	21	20	8.4	7.7
March	840	736	2.50	2.37	21	19.38	8.1	8
April	1,052	842	2.25	2.25	19.6	19.25	8.7	8.5
May	1,479	1,130	2.12	2.12	18	16.3	8.5	7.7
June	1,860	1,435	2.00	1.75	18.75	17	9.4	9.7
July	1,590	1,481	2.17	2.00	18.3	17.12	8.4	8.6
August	1,436	1,339	2.25	2.25	20	19	9	8.4
September	1,097	1,122	2.50	2.45	22.75	20	9.1	8.2
October	987	837	2.85	2.50	24	22	8.1	8.8
November	895	793	3.25	2.63	26	23.4	8	9
December	835	726	3.25	3.00	27.2	21	8.37	7
Total	....	....	....	....	....	....	....	....
Daily average	....	....	2.53	2.39	21.36	19.57	8.5	8.25

Monthly milk receipts, by railroads, showing number of cans (40 quarts each) of milk, cream, and condensed milk carried each month during 1899 by the different lines delivering such in the New York markets, also daily average and totals.

[From the Milk Reporter.]

Month.	Erie.	Harlem.	Ontario.	Susquehanna.	Northern.	West Shore.	New Haven.
January	111,221	79,939	121,868	57,119	12,400	66,881	38,345
February	126,513	67,004	108,312	51,598	11,200	60,335	35,342
March	140,455	85,206	122,865	60,122	15,679	69,827	38,070
April	134,642	71,034	129,632	60,278	14,231	72,431	35,025
May	145,108	71,486	156,957	65,694	15,047	80,847	39,187
June	160,099	58,232	151,658	68,835	14,887	55,593	39,871
July	148,024	38,103	189,836	64,762	13,690	47,645	35,009
August	138,826	34,925	146,340	61,430	13,240	44,488	33,361
September	129,294	36,532	144,167	59,803	12,029	43,552	29,592
October	131,273	47,618	148,969	60,527	12,090	43,658	31,062
November	123,455	47,693	137,288	57,811	12,228	43,186	33,067
December	124,239	51,671	133,041	58,339	12,670	46,144	35,458
Total	1,646,149	689,443	1,690,933	729,318	159,391	673,987	423,674
Daily average	4,590	1,889	4,633	1,998	437	1,846	1,161
Total, 1898	1,665,590	735,947	1,508,622	733,162	166,609	820,668	474,789
Daily average	4,563	2,016	4,133	2,009	456	2,248	1,301

Month.	Delaware, Lackawanna and Western.	Long Island.	New York Central and West Shore (long haul).	New Jersey Central.	Homer Ramsdell Transportation Company.	Lehigh Valley.	Other sources.
January	162,380	77	....	6,200	....	27,800	18,600
February	148,550	53	....	7,196	....	26,115	16,800
March	167,706	96	....	7,843	12,306	31,835	18,600
April	172,219	90	....	6,106	26,647	37,551	18,000
May	189,553	73	....	7,891	30,087	48,423	18,600
June	209,239	....	50,561	8,033	30,725	52,232	18,000
July	195,300	....	57,574	7,130	29,380	52,639	18,600
August	191,024	....	57,531	7,200	29,351	50,385	18,000
September	177,000	....	49,410	6,120	26,398	42,352	18,000
October	159,150	....	42,559	7,330	26,908	42,178	18,600
November	155,552	....	47,568	7,815	23,328	36,932	18,000
December	145,866	....	47,590	7,682	24,558	35,234	18,600
Total	2,073,539	389	352,796	86,546	159,691	483,880	218,400
Daily average	5,681	....	....	237	711	1,325	600
Total, 1898	2,093,389	21,804	....	96,202	260,449	390,989	219,000
Daily average	5,735	60	....	264	714	1,071	600

Growth of milk trade, 1895–1899; number of cans (milk, cream, and condensed milk being included) received in the New York market during the past five years, and the amount carried by each line.

[From the Milk Reporter.]

Railroad.	1895.	1896.	1897.	1898.	1899.	Total carried during five years.
Erie	1,534,866	1,538,670	1,585,843	1,665,590	1,646,149	7,971,118
Harlem	880,635	841,539	767,228	735,947	689,443	3,914,792
New York, Ontario and Western	1,270,937	1,430,459	1,423,130	1,508,622	1,691,933	7,325,081
New York, Susquehanna and Western	685,209	657,230	690,831	733,162	729,318	3,495,750
New York and Northern	220,670	106,405	115,461	166,609	159,391	770,536
West Shore	472,598	522,818	698,128	820,668	673,987	3,188,199
New York, New Haven and Hartford	286,491	430,830	481,081	474,789	423,674	2,096,865
Delaware, Lackawanna and Western	1,897,135	1,963,038	1,960,617	2,093,389	2,073,539	9,987,718
New York Central and West Shore (long haul)	....	....	....	....	352,796	352,796
Long Island	50,380	38,040	30,395	21,804	389	141,008
New Jersey Central	85,079	91,670	114,110	96,202	86,546	476,607
Homer Ramsdell Transportation Co	250,864	241,650	262,791	260,449	259,691	1,275,445
Lehigh Valley	172,726	210,667	279,428	390,896	483,880	1,537,597
Other sources	217,450	219,600	219,000	219,000	218,400	1,093,450
Total	8,027,040	8,295,616	8,628,043	9,187,127	9,489,136	43,626,962
Daily average	21,992	22,666	23,638	25,170	25,998	23,341

Percentage of increase from 1895 to 1899, 18.2 per cent.

Comparative table showing the total amount of milk, cream, and condensed milk received in the New York City market during May in the years of 1900 and 1899; also the amount with the proportion of total carried by each line delivering milk in that market.

Railroad.	Total cans of milk, including bottled.		Of this in bottles.		Total cans of cream and condensed milk.		Daily average milk, cream, and condensed milk.		Percentage.	
	1900.	1899.	1900.	1899.	1900.	1899.	1900.	1899.	1900.	1899.
Erie	140,502	133,889	30,633	24,331	11,467	12,219	4,902	4,681	17.1	16.7
Harlem	50,530	69,392	18,851	25,059	2,695	2,091	1,717	2,306	6	8.2
Ontario	128,718	146,856	37,621	36,062	8,624	10,101	4,430	5,063	15.4	18
Susquehanna	70,285	60,773	19,930	12,010	4,185	4,921	2,412	2,119	8.4	7.6
Northern	12,200	15,017	1,907	1,512	....	....	391	485	1.3	1.7
West Shore	51,493	74,738	22,900	20,148	8,009	6,109	1,919	2,608	6.7	9.3
New Haven	36,421	39,378	6,819	6,256	13	109	1,175	1,274	4.1	4.6
Delaware, Lackawanna and Western	142,837	182,443	45,895	46,826	4,959	7,110	4,768	6,114	16.6	21.8
New York Central (long haul)	101,386	....	6,137	....	4,729	....	3,423	....	11.9	......
New Jersey Central	8,580	7,595	333	431	265	296	285	255	1	.9
Homer Ramsdell Transportation Co	30,266	29,386	232	700	716	701	1,000	971	3.5	3.4
Lehigh Valley	51,060	15,226	7,441	3,660	2,205	3,197	1,718	1,562	6	5.6
Other sources	18,600	18,600	....	....	....	....	600	600	2	2.2
Total	842,881	823,396	198,699	177,295	48,167	45,857	....	....	....	......

(7) *Apparent New York exchange prices to producers of milk at points subject to a freight rate of 26 cents per can, commencing January 1, 1898.*

	Per quart.	Monthly average.		Per quart.	Monthly average.
1898.	*Cents.*	*Cents.*	1899.	*Cents.*	*Cents.*
Jan. 1 to 31	2¾	2.75	Jan. 1 to 31	2¾	2.75
Feb. 1 to 11	2¾	2.60	Feb. 1 to 28	2½	2.50
Feb. 12 to 28	2½		Mar. 1 to 31	2½	2.50
Mar. 1 to 15	2½	2.37	Apr. 1 to 30	2¼	2.25
Mar. 16 to 31	2¼		May 1 to 15	2¼	2.12
Apr. 1 to 30	2¼	2.25	May 16 to 31	2	
May 1 to 15	2¼	2.12	June 1 to 30	2	2
May 16 to 31	2		July 1 to 10	2	2.17
June 1 to 30	1¾	1.75	July 11 to 31	2¼	
July 1 to 31	2	2.00	Aug. 1 to 31	2¼	2.25
Aug. 1 to 31	2¼	2.25	Sept. 1 to 30	2½	2.50
Sept. 1 to 6	2¼	2.45	Oct. 1 to 19	2¾	2.85
Sept. 7 to 30	2½		Oct. 20 to 31	3	
Oct. 1 to 31	2½	2.50	Nov. 1 to 30	3¼	3.25
Nov. 1 to 15	2½	2.63	Dec. 1 to 31	3¼	3.25
Nov. 16 to 30	2¾				
Dec. 1 to 31	3	3.00			

These prices are subject to deductions of various kinds, and are based on the zone system of freight rates on milk peculiar to the New York City milk trade.

The railroads carrying milk into New York City are divided by the Interstate Commerce Commission into freight zones, each zone having its rate of freight established by the Commissioners.

The freight zones are grouped as follows:

Freight per can of 40 quarts.

	Cents.
Group A	23
Group B	26
Group C	29
Group D	32

The exchange price is always based on Group B, the producer paying or receiving the difference in freight according to rate of zone.

There is also deducted from exchange price one-half cent per quart for station charges.

The following table shows the actual difference between exchange prices and net prices received by farmer or producer for the years 1897, 1898, 1899:

(8) *Net wholesale prices paid to producers for milk for New York market.*[1]

[Cents per quart.]

	Zone A.				Zone B.				Zone C.				Zone D.			
	Exchange price.	Station charges.	Plus differential freight.	Net to farmers.	Exchange price.	Station charges.	No differential freight.	Net to farmers.	Exchange price.	Station charges.	Less differential freight.	Net to farmers.	Exchange price.	Station charges.	Less differential freight.	Net to farmers.
1897.																
January	2.75	0.50	0.075	2.325	2.75	0.50	.....	2.25	2.75	0.50	0.075	2.175	2.75	0.50	0.15	2.1
February	2.63	.50	.075	2.205	2.63	.50	.....	2.13	2.63	.50	.075	2.055	2.63	.50	.15	1.98
March	2.37	.50	.075	1.945	2.37	.50	.....	1.87	2.37	.50	.075	1.795	2.37	.50	.15	1.72
April	2.13	.50	.075	1.705	2.13	.50	.....	1.63	2.13	.50	.075	1.555	2.13	.50	.15	1.48
May	2.00	.50	.075	1.575	2.00	.50	.....	1.50	2.00	.50	.075	1.425	2.00	.50	.15	1.35
June	1.75	.50	.075	1.325	1.75	.50	.....	1.25	1.75	.50	.075	1.175	1.75	.50	.15	1.1
July	1.94	.50	.075	1.515	1.94	.50	.....	1.44	1.94	.50	.075	1.364	1.94	.50	.15	1.29
August	2.00	.50	.075	1.575	2.00	.50	.....	1.50	2.00	.50	.075	1.425	2.00	.50	.15	1.35
September	2.25	.50	.075	1.825	2.25	.50	.....	1.75	2.25	.50	.075	1.675	2.25	.50	.15	1.6
October	2.50	.50	.075	2.075	2.50	.50	.....	2.00	2.50	.50	.075	1.925	2.50	.50	.15	1.85
November	2.83	.50	.075	2.405	2.83	.50	.....	2.33	2.83	.50	.075	2.255	2.83	.50	.15	2.18
December	3.00	.50	.075	2.575	3.00	.50	.....	2.50	3.00	.50	.075	2.425	3.00	.50	.15	2.35
1898.																
January	2.75	.50	.075	2.325	2.75	.50	.....	2.25	2.75	.50	.075	2.175	2.75	.50	.15	2.1
February	2.60	.50	.075	2.175	2.60	.50	.....	2.10	2.60	.50	.075	2.025	2.60	.50	.15	1.95
March	2.37	.50	.075	1.945	2.37	.50	.....	1.87	2.37	.50	.075	1.795	2.37	.50	.15	1.72
April	2.25	.50	.075	1.825	2.25	.50	.....	1.75	2.25	.50	.075	1.675	2.25	.50	.15	1.6
May	2.12	.50	.075	1.695	2.12	.50	.....	1.62	2.12	.50	.075	1.545	2.12	.50	.15	1.47
June	1.75	.50	.075	1.325	1.75	.50	.....	1.25	1.75	.50	.075	1.175	1.75	.50	.15	2.1
July	2.00	.50	.075	1.575	2.00	.50	.....	1.50	2.00	.50	.075	1.425	2.00	.50	.15	1.35
August	2.25	.50	.075	1.825	2.25	.50	.....	1.75	2.25	.50	.075	1.675	2.25	.50	.15	1.6
September	2.45	.50	.075	2.025	2.45	.50	.....	1.95	2.45	.50	.075	1.875	2.45	.50	.15	1.8
October	2.50	.50	.075	2.075	2.50	.50	.....	2.00	2.50	.50	.075	1.925	2.50	.50	.15	1.85
November	2.63	.50	.075	2.205	2.63	.50	.....	2.13	2.63	.50	.075	2.055	2.63	.50	.15	1.98
December	3.00	.50	.075	2.575	3.00	.50	.....	2.50	3.00	.50	.075	2.425	3.00	.50	.15	2.35
1899.																
January	2.75	.50	.075	2.325	2.75	.50	.....	2.25	2.75	.50	.075	2.175	2.75	.50	.15	2.1
February	2.50	.50	.075	2.075	2.50	.50	.....	2.00	2.50	.50	.075	1.925	2.50	.50	.15	1.85
March	2.50	.50	.075	2.075	2.50	.50	.....	2.00	2.50	.50	.075	1.925	2.50	.50	.15	1.85
April	2.25	.50	.075	1.825	2.25	.50	.....	1.75	2.25	.50	.075	1.675	2.25	.50	.15	1.6
May	2.12	.50	.075	1.695	2.12	.50	.....	1.62	2.12	.50	.075	1.545	2.12	.50	.15	1.47
June	2.00	.50	.075	1.575	2.00	.50	.....	1.50	2.00	.50	.075	1.425	2.00	.50	.15	1.35
July	2.17	.50	.075	1.745	2.17	.50	.....	1.67	2.17	.50	.075	1.595	2.17	.50	.15	1.52
August	2.25	.50	.075	1.825	2.25	.50	.....	1.75	2.25	.50	.075	1.675	2.25	.50	.15	1.6
September	2.50	.50	.075	2.075	2.50	.50	.....	2.00	2.50	.50	.075	1.925	2.50	.50	.15	1.85
October	2.85	.50	.075	2.425	2.85	.50	.....	2.35	2.85	.50	.075	2.275	2.85	.50	.15	2.2
November	3.25	.50	.075	2.825	3.25	.50	.....	2.75	3.25	.50	.075	2.675	3.25	.50	.15	2.6
December	3.25	.50	.075	2.825	3.25	.50	.....	2.75	3.25	.50	.075	2.675	3.25	.50	.15	2.6

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[1] Prepared by Mr. H. T. Coon, secretary of the Five States Milk Protective Association, special agent, Little York, N. Y.

(9) *Average prices and freight at New York, 1870–1899.*—The average yearly wholesale prices per quart paid by receivers of milk in New York from 1870 down to the present time are given below. The figures from 1870 to 1895 are taken from the decision of the Interstate Commerce Commission in the case of the Milk Producers' Protective Association *v.* the Delaware, Lackawanna and Western Railroad Company, of March 13, 1897.

Year.	Price per quart.	Freight rate per can.	Per cent of price in freight.	Year.	Price per quart.	Freight rate per can.	Per cent of price in freight.
	Cents.	*Cents.*			*Cents.*	*Cents.*	
1870	4.58	....	....	1885	2.77	32	11
1871	3.83	....	....	1886	2.80	35	12
1872	3.67	....	....	1887	2.81	35	12
1873	3.75	....	....	1888	2.83	35	12
1874	3.65	....	....	1889	2.59	35	13
1875	3.54	....	....	1890	2.63	32	12
1876	3.38	....	....	1891	2.67	32	12
1877	3.15	55	17	1892	2.68	32	12
1878	2.63	55	21	1893	2.79	32	11
1879	2.33	40	17	1894	2.63	32	12
1880	2.85	40	14	1895	2.52	32	12
1881	2.98	40	13	1896	....	....	....
1882	3.25	40	12	1897	....	....	....
1883	3.15	40	12	1898	2.53	32	12
1884	3.06	27.5	9	1899	2.39	32	13

3. PHILADELPHIA'S MILK TRADE.[1]

Among the milk supplies of great cities that of Philadelphia is remarkable from the fact that nearly all of it is drawn from a territory not over 30 miles from the city. Cities like New York, Boston, and Baltimore go much farther, in some instances as high as 300 miles, for their supply. But Philadelphia is situated in the midst of some of the finest dairy sections of the East. About 100,000,000 quarts annually are required to supply the city's needs. Some years ago the amount furnished was greatly in excess of the actual requirements, but owing to the growth of the outlying suburban districts, considerable quantities of this milk are used near the home of production and the dealers are having recourse to milk from a long distance. From New York and New Jersey a considerable supply is daily being brought into the city, as well as from distant points in Pennsylvania. From Harrisburg, Reading, and the territory adjacent thereto, a large quantity is being daily shipped in refrigerator cars. At times in this market there is a considerable surplus, causing the dealers some trouble in handling it. But most of the shippers are willing to hold back in the country a day's milk in each week during such times in order to rid the market of such an objectionable thing as a surplus. All of Philadelphia's milk supply is figured in dry quarts, whereas in most other markets liquid quarts prevail. This would make quite a difference in the showing as to the total number of quarts received yearly. About 86 per cent of the supply comes by rail, the remainder being carted into the city by producers, who, having retail routes of their own, become retailers and producers at the same time. The freight for short-distance milk averages about one-half cent per quart and is paid by shipper at time of shipment.

Prices paid to producer average 2½ to 3 cents per quart in summer and 3½ to 4 cents in winter, each producer making his own arrangements with individual dealers, the system being here different from many other places, where the bulk of the business is done by contractors or wholesalers who job out the milk to dealers in such quantities as they may need. The plan operating in Philadelphia brings the producer and dealer in direct contact, thereby giving each an opportunity of correcting wrongs or abuses almost immediately.

The dealers have an organization known as the Philadelphia Milk Exchange, incorporated in January, 1886. This meets monthly and its objects are to secure unity of action, to promote a more friendly intercourse among its members, to adjust differences between them, to diffuse reliable commercial intelligence, to foster trade and protect it against unjust or unlawful exactions, to reform abuses, collect statistics, and generally advance the interests of the milk trade. At each stated monthly meeting an informal agreement as to the price which ought to be paid the succeeding month is made, and as a general rule this price is supported. There is at present no organization among the farmers supplying Philadelphia. Several years ago the farmers combined in an attempt to correct abuses and adjust, to them, satisfactory prices, even going so far as to sell their product direct to the consumer, causing a demoralization of prices and great losses to producers and dealers. The movement lasted about 3 years, when it was discontinued.

(1) *Retailing milk in Philadelphia.*—Milk retails at 6 cents per quart in summer and 8 cents in winter. The milk-jar system is gradually coming into general use, a system causing considerable extra expense to the dealers by reason of being compelled to have extra help to wash and fill, and great losses by theft and breakage. The quality of milk received in the Philadelphia market is the best. This is attributed to a greatly increased knowledge of late years on the part of producer and dealer of requirements, as well as competition for business which compels one to put out the best goods obtainable. Some years ago a dealer would average on a route 150 to 200 quarts of milk daily at retail, whereas now 100 quarts, daily average, is nearer the mark. In summer, when milk sells for 6 cents retail and the dealer pays 3 cents, another cent can be added for ice, jars, blacksmithing and other sundry expenses, which leaves the dealer 2 cents per quart on a 100 quart route ($2 per day), out of which he has to pay for horse keep, wagon repairs, keep his family, and lay by a few cents for a rainy day. As he starts out on his work at 4 a. m. and finishes at noon his street work, one can readily see that this end of the business is not gilt and glitter.[2]

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[1] From the American Agriculturist, April 7, 1900.

[2] J. H. Miller, secretary, Philadelphia Milk Exchange, in The Milk Reporter.

Milk receipts of Philadelphia monthly for 1899 (quarts), and yearly from 1888 to 1899, inclusive.

[From the Milk Reporter, February, 1900.]

	Pennsylvania Railroad System.			Philadelphia and Reading.	
	Kensington.	Camden.	Thirty-first and Chestnut.	Camden.	Philadelphia.
January	20,980	1,544,540	1,177,290	107,720	2,987,286
February	20,350	1,376,820	1,282,110	84,780	2,533,946
March	19,280	1,582,920	1,568,930	102,200	3,167,302
April	20,190	1,689,390	1,553,950	101,280	3,098,908
May	27,200	1,927,000	1,759,560	116,180	3,336,748
June	26,350	1,862,980	1,761,620	93,140	3,301,292
July	20,440	1,615,600	1,644,550	82,420	3,188,700
August	23,560	1,592,310	1,600,250	97,760	3,248,900
September	24,920	1,683,990	1,474,130	75,820	3,136,010
October	20,440	1,707,120	1,508,220	77,680	3,111,660
November	19,790	1,592,060	1,445,100	70,860	2,975,440
December	21,190	1,603,900	1,512,800	74,100	3,072,370
Total	264,970	[1]19,778,630	18,588,510	1,084,240	37,158,532

	Lehigh Valley via Philadelphia and Reading.	Baltimore and Ohio.	Wagons.	Total.
January	183,480	178,520	600,000	7,699,816
February	399,160	401,220	600,000	6,698,386
March	543,040	495,940	600,000	8,079,612
April	699,240	537,196	600,000	8,300,154
May	930,880	603,108	600,000	9,300,676
June	1,238,080	578,200	600,000	9,461,642
July	1,146,240	489,092	600,000	9,087,042
August	1,044,040	498,256	600,000	8,705,076
September	767,800	173,580	600,000	8,236,250
October	742,480	441,760	600,000	8,212,360
November	687,400	433,720	600,000	7,824,340
December	612,960	446,800	600,000	7,974,120
Total	9,621,800	5,880,592	7,200,000	99,580,074

MILK RECEIVED IN PHILADELPHIA FROM 1888 TO 1899, INCLUSIVE.

	1888.	1889.	1890.	1891	1892.	1893.
Pennsylvania System	[2]31,079,300	[2]32,509,500	[2]35,349,720	[2]36,203,990	[2]38,242,810	[2]39,295,910
Reading	37,524,480	37,389,982	37,887,821	36,784,678	36,718,661	35,484,124
Lehigh Valley						3,704,920
Baltimore and Ohio	3,608,380	5,235,680	5,120,340	5,005,752	5,687,300	6,055,040
Wagons	10,000,000	10,500,000	10,600,000	10,600,000	10,600,000	10,000,000
Total	82,212,160	85,635,162	89,257,881	88,594,420	91,278,771	94,539,994

	1894.	1895.	1896.	1897.	1898.	1899.
Pennsylvania System	[2]39,489,560	[2]40,013,280	38,202,133	37,101,100	38,090,530	38,632,110
Reading	35,945,016	31,054,540	31,970,980	33,111,118	34,634,908	38,242,772
Lehigh Valley	7,056,080	6,988,240	7,430,960	8,059,680	8,687,760	9,621,800
Baltimore and Ohio	6,548,508	6,133,824	6,871,840	6,384,112	6,105,884	5,880,592
Wagons	9,500,000	9,000,000	9,000,000	9,000,000	7,200,000	7,200,000
Total	98,539,164	96,219,884	93,475,913	93,959,340	94,719,082	99,580,074

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[1] Total receipts (Federal street, Camden, Pennsylvania Railroad System), for Philadelphia and Camden, 22,590,860 quarts.

[2] Philadelphia and Camden receipts included.

4. THE MILK TRADE OF ST. LOUIS.[1]

Assuming that the census now being taken will show that St. Louis has a population of 600,000, the daily per capita consumption of milk in this city is two-fifths of a pint, or a total of 30,136 gallons. Of this quantity 13,000 gallons are "railroad" milk, the remainder being brought into the city by wagons from territory adjacent to the city, or produced from dairies located within the city limits. In these latter there are about 8,000 cows that are kept for commercial milk purposes.

(1) *City dairies.*—As affecting the milk supply of St. Louis the city dairies are a very important factor. As already stated, the larger part of the city's milk supply is produced in these dairies that are located within the city limits, many of which are in densely populated districts. The condition is one which probably can not be found to exist in another city of equal population in the world.

The basis of the city dairy business is the offal from the extensive breweries and distilleries located here, the spent grain from these being utilized for food for the cows. This refuse from the breweries comprises, in the majority of cases, a large proportion of the food given the cows. No attempt is made by the breweries to rid this waste product that is disposed of locally of any of its moisture, which comprises 75 per cent of the total waste, and it is fed by the dairymen generally in the form of slop or a semiliquid condition from water-tight mangers, and often constitutes the cow's sole ration of food and drink. As might be expected, the food, being in a warm and fermenting condition when obtained from the breweries, becomes quite sour before it is consumed by the cows, and the cow mangers and the entire premises reek with germs of fermentation.

The cows are, for most part, kept in very contracted quarters, in many instances confined in pairs in such narrow stalls that only one can lie down at a time, and are kept there from the time they become members of the herd until they die in the stalls or are sent to the shambles. After a cow gets used to the lack of exercise, the liquid fermenting food, and moist hot atmosphere, it is said that she takes on flesh and gives a good flow of milk. Whether the flesh and milk are such as will make wholesome food is a matter for consideration by the city health department. We have to consider just now the effect of this system on the city milk supply as a whole.

Unquestionably the enormous output of spent malt from the extensive brewery interests in this city is the most potent factor of all affecting the St. Louis milk supply.

Fed under proper conditions and in combination with other foods, spent malt is a valuable dairy food. It is rich in nutritive elements needed to induce a good flow of milk, and it is much relished by cows. Even in the wet state it may form a part of the cow's ration with good advantage, if fed fresh and under conditions which will not induce fermentation in the cow stables. But these conditions are practically never obtained in the city dairies. Unless the spent malt is dried, the excess of water makes the weight such that it is out of the question to transport it by rail to the dairy districts. The dried grain is highly regarded as a dairy food. It can be and is exported from this city to Europe for feeding purposes. Only two of the breweries in this city make any effort to dry this spent malt. The dried grain commands a price of about $12 per ton f. o. b. St. Louis. At this price it is a cheaper food than are oats, wheat, bran, corn, or other food stuffs in common use at prevailing prices. But the wet grain is sold to local dairymen at such a price that a quantity sufficient to make a ton of the dried grain costs about $5.60. Thus it is apparent that the city dairyman has the advantage of a very cheap cow feed.

There are about 450 dairymen in the city. What it costs them to produce a gallon of milk it has been impossible to accurately ascertain. Estimates, however, fix the cost at 10 cents per gallon, and the average selling price of the city produced milk is 20 cents per gallon.

The producers and handlers of country milk can not compete with these prices, and can only find customers for their product among that portion of the city's population that is willing to pay a larger price for goods of superior merit. The milk business is divided, therefore, quite distinctly into two divisions. The one includes the city, or "swill" dairy, as it is called, and in the other the "railroad" milk, or that produced on farms and brought into the city by rail. A comparatively small quantity of milk, but of good quality, is produced on farms close to the city and brought in by wagons. This may properly be regarded as railroad milk, at least in respect to quality.

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[1] Reported by Mr. Levi Chubbuck, special agent, St. Louis, Mo.

(2) *Railroad supply of milk.*—St. Louis is admirably located in reference to territory in which the city's supply of milk can be produced. In this respect not one of the large cities of the country has equal advantages. St. Louis is surrounded on all sides by a farming territory that is unsurpassed in natural adaptability for dairying. Excepting East St. Louis, lying across the Mississippi River and on its eastern bank, St. Louis has no populous suburbs that are themselves consumers of railroad milk. Along the entire Missouri arc of the circle surrounding the city farm lands come practically to the city limits, and within a circle having a radius of 100 miles from St. Louis there is more available farm land, and that is cheaper in price, than can be found in an equal area around any other large city in the country. Probably in no other similar area are dairy foods produced so abundantly or so cheaply. The climatic conditions are also very favorable for dairying. It thus appears that there need be no lack of milk supply for St. Louis, and that the dairy business should be quite remunerative to the producers, and undoubtedly would be but for the situation outlined under existing conditions. The daily product in the city of the 8,000 cows, fed on an unusually cheap food and kept on a very cheap plan as to buildings, etc., thus enabling the producer to sell cheaply, is an unsurmountable obstacle, so long as the condition exists, to the proper development of the railroad milk industry.

Among those who possess some knowledge of the character of the city produced milk and appreciate the more healthful character of that produced on farms there can be a trade in railroad milk, notwithstanding its necessarily higher price.

(3) *Prices of milk.*—As has been stated, the consumers pay for the city-produced milk an average of 20 cents per gallon, or 5 cents per quart. For railroad milk the average price paid by the consumer is 6.5 cents per quart. Of this price the producers are paid 2.25 cents per quart delivered at the station at St. Louis. The average transportation charge between the farmer's station and St. Louis is one-half cent per quart. This leaves 3.75 cents per quart to meet costs of and profits on distribution in the city. This would seem to be too large a share of what the consumers pay for milk and out of proportion to what the producers get. Yet it is evident to anyone at all familiar with the milk business of St. Louis that the business is by no means exceedingly profitable where honest goods are sold, and it is also apparent that the producer's profit is but a meager one.

There is room for considerable saving in cost of distribution by the adoption of more systematic methods. In the matter of facilities for handling provided by the railroads, the milk is almost wholly transported in 8-gallon cans placed in the baggage cars. No refrigeration is provided on any road handling milk. As the great bulk of the milk is produced within a disance covered by a 2-hour run, it is thought that there is little need of refrigerator service. There is, however, considerable sour milk charged against the shipper which might, in large part, be saved if better facilities for handling milk were provided by the railroads.

On receipt of the milk at the various depots it is examined to determine if any is sour. One concern in the city has a chemical test (originated by the chemist that is employed) that is applied to a sample taken from every can received. This test is accurate and quick and quite satisfactory. Generally the inspection for sour milk is very crudely done. Shippers are allowed, as a rule, 25 cents per 8-gallon can for all milk that is declared sour. This feature of the business is entirely in the hands of the various concerns handling railroad milk, and the shippers are at their mercy. In some instances the power is unquestionably abused and shippers suffer an unjust loss from deductions for sour milk.

In serving customers the great proportion are served by dipping from cans or tanks into open measures. A few concerns are serving bottled milk and cream and the demand for this service is increasing.

The great lack in the milk business of St. Louis is proper and adequate city supervision and control. There is an entire absence of organization or combination for the purpose of affecting prices or for making methods for handling uniform.

There is little to prevent irresponsible parties from engaging in the business of retailing milk, and the result is that many concerns begin business, work up a trade, and after a short time close up, leaving a good many milk producers in the lurch for milk shipped.

(4) *Summary.*—The daily consumption of milk in St. Louis is 30,136 gallons, 13,000 gallons of which is brought into the city by rail. The remainder is brought into the city by wagons from farms adjacent to the city, and produced from dairies maintained within the city.

There are in these city dairies 8,000 cows which are fed principally on the waste product of breweries and distilleries. City dairy milk costs consumers 5 cents per quart; railroad milk 6.25 cents per quart. Producers of railroad milk receive 2.25 cents per quart for milk delivered at station in St. Louis. Railroad charges average for long and short distances one-half cent per quart. Cost of and profit on distribution in the city, 3.75 cents per quart.

Longest distance milk is brought to St. Louis, 151 miles, from Lagrange, Mo.

Railroad milk is handled in 8-gallon cans and in ordinary baggage cars of regular passenger trains.

REFERENCES TO MILK MAP.

Stations longest distance from St. Louis on various railroads bringing milk to St. Louis are as follows:

	Miles.
Labaddie, Mo., on Missouri Pacific R. R	35
St. Clair, Mo., on St. Louis and San Francisco R. R	50
Desoto, Mo., on St. Louis, Iron Mountain and Southern R. R	43
Bonneterre, Mo., on Mississippi River and Bonneterre R. R	58
Marissa, Ill., on Illinois Central (Southern Division) R. R	35
Mount Vernon, Ill., on Louisville and Nashville R. R	69
Salem, Ill., on Baltimore and Ohio R. R	68
Altamont, Ill., on Terre Haute and Indianapolis (Vandalia) R. R	85
Sorento, Ill., on Toledo, St. Louis and Kansas City R. R	47
Litchfield, Ill., on Cleveland, Cincinnati, Chicago and St. Louis R. R	52
Macoupin, Ill., on Chicago and Alton R. R	50
Greenfield, Ill., on Chicago, Burlington and Quincy R. R	61
Lagrange, Mo., on St. Louis, Keokuk and Northern R. R	151
Wright City, Mo., on Wabash (Western Division) R. R	45

5. THE MILK SUPPLY OF CLEVELAND, OHIO.

Competition between farmers supplying the consumers directly and dealers who get their supply from more distant sources is closer on milk than on any other article in the list. Within a radius of about 12 miles most of the milk is hauled to the city by wagon; beyond the 12-mile limit steam railroads and electric lines carry nearly all the product. The limit in distance from which milk comes is 40 miles. There is no combination of milk dealers in the city controlling the trade. There is, however, one local combination among producers, namely, the Northern Ohio Milk Dealers' Association.[1] This organization was started in 1889, mainly for the purpose of protecting producers from unscrupulous milk dealers in the city of Cleveland. There is not a high degree of organization in the association, simply an agreement not to underbid each other, to maintain a price fixed by the association, which was made as nearly reasonable as possible.[2] The association has accomplished the purpose for which it was formed and has put the producer upon a much more stable basis. All poor payers among the dealers are blacklisted by the association.

Contracts between milk dealers and milk producers stipulate that during the summer months producers shall receive a net price of 10 cents per gallon after having paid the freight, and in winter a price that will net them 12 cents after paying the freight. These two prices were fixed by the milk dealers' association.

Most of the dealers buy their milk by the gallon, some few by the 100 pounds. In January last one firm buying by the gallon was paying 13 cents per gallon, while one of the other plan was paying $1.20 per 100 pounds.

There is no arrangement between country shippers and city distributors by which to prevent a scarcity or surplus of milk supply. Every individual dealer manages his business independently.

(1) *Inspection.*—The Cleveland health department has a milk inspector constantly at work. He attempts to sample the milk of every different salesman in the city once a month. There is no routine about his work so far as the milkmen can see. He catches them at odd times and at odd places, thus precluding the possibility of systematic fraud. Dealers whose product has been found below the standard are treated quite leniently by the department, and are not prosecuted except upon repeated offenses.

(2) *Licensing.*—Every wagon and every store or house selling milk must have a license, which costs $1.

Total number of licenses issued in 1899	1,417
For stores and houses	814
For wagons	603

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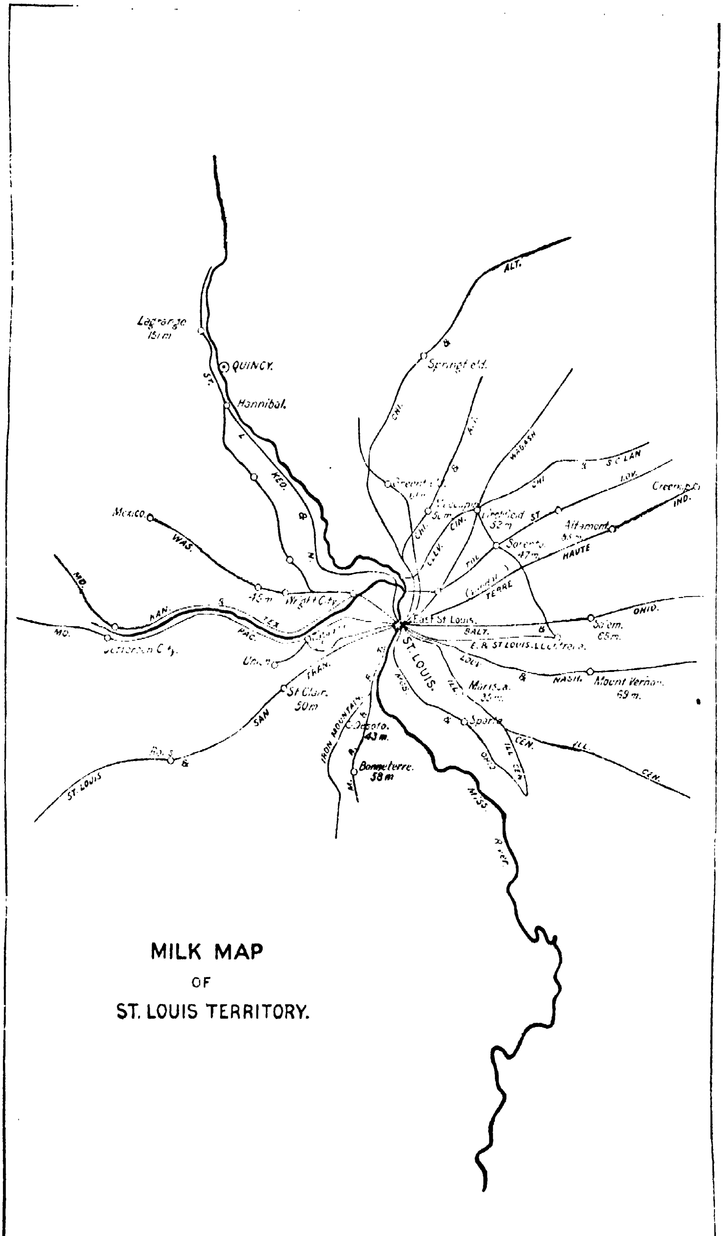
[1] The name of the association is a little misleading; it is purely an organization of and for producers.

[2] Ten cents per gallon in summer and 12 cents in winter.



MILK MAP
OF
ST. LOUIS TERRITORY.

The total number of licenses represents 1,090 different dealers. About 300 of these were producers who bring their own product to the city and sell direct to the consumer. Number of milk routes, 603; number of milk routes in a representative section of 25 blocks in the city, 100 to 150. There is no districting of the city among the leading dealers.

6. THE MILK SUPPLY OF MILWAUKEE.[1]

The daily milk supply of Milwaukee varies from 2,000 cans of 8 quarts each in winter to 2,400 cans in summer. About half of the quantity consumed is brought in by wagons and by them delivered to consumers. The other half is received by rail. The rail supply is gathered from an area of 45 miles. The maximum rate charged per can of milk is 16 cents, and from that down, according to distance. The maximum rate then is half a cent per gallon. The price paid by consumers is 18 cents per gallon, or 4½ cents per quart in winter and 4 cents per quart in summer. This is a lower price than is usual for a city of the size of Milwaukee; and though it is claimed that the consumption of beer there has no effect whatever on the consumption of milk, this low price may indicate the contrary. It is certain that in larger cities the practice of drinking milk during hot weather has noticeably affected the demand for beer.

The producer receives in summer 80 cents per 8-gallon can f. o. b. railway station; in winter 90 cents. At this rate the cost of distribution may be determined. Assuming the average rate on milk received by rail to be 12 cents per can the year round, or ⅜ of a cent per quart, summer's milk costs the dealer 92 cents per can. He sells it at 16 cents per gallon, or $1.28 per can, at a gross margin of 36 cents per can, or nearly 30 per cent of the cost to the consumer. The producer gets 62½ per cent of the consumer's cost and the railroad the balance, or 7½ per cent. The farmer who delivers from farm to family direct is his own distributer, and pockets the entire 70 per cent above the price received by the farmer who ships by rail.

7. MILK TRADE OF CINCINNATI.

The milk trade is not organized in any way here. The contracts between producers and dealers for their regular supplies are merely verbal. There is little competition between farmers supplying families on their own milk routes and the dealers who get their supplies from a distance. Farmers retailing milk from wagons come a distance of 10 miles to the city, and the railway supply is drawn from not less than 50 miles away. The city regulations require a standard of 12 per cent of solids, one-fourth of which must butter fat. Dealers and peddlers are licensed without fee. The different retail deliveries cover the same territory to some extent in the 400 milk routes in the city. The retail price of milk varies from 5 to 8 cents per quart with the season, the method of service, and the quality. Milk received from two main shipping points of supply in Indiana and Ohio pays a freight rate of one-half cent a quart or 2 cents per gallon—just about the average rate paid on milk received at the Hudson River terminals for New York.

The statistical results are given below for Cincinnati:

Date.	Product.	Consumer paid, per quart.	Producer received, per quart.	Expenses of distribution, per quart.	Percentage for distribution.	Percentage to producer.
		Cents.	*Cents.*	*Cents.*	*Per cent.*	*Per cent.*
May 15, 1900	Sweet milk *a*	6	1.65	4.35	72.5	27.5
Jan. 15, 1900	do *b*	6	2.73	3.27	54.5	45.5

a Aerated sold mostly. *b* Pasteurized sells at 1 cent per quart more.

8. THE MILK SUPPLY OF SAN FRANCISCO.[2]

In respect to the method of transportation San Francisco resembles New York City, in that the main supply has to be brought by ferry from the end of the rail routes. But the San Francisco termini are in the city. The rate to the city covers ferriage, which it does not at New York. Ferriage is a heavy tax at best in any city's traffic.

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[1] Reported by E. O. Hubbard, special agent, Milwaukee, Wis.

[2] Information furnished through kindness of Wm. H. Saylor, assistant secretary State dairy bureau of California.

The extreme distance from which milk is delivered by wagon from the production area south of San Francisco is 14 miles. Milk will rarely stand a much longer haul than this by wagon. By rail the remotest point is 35 miles distant. By boat the supply is brought daily from points 70 miles from the city. The boat rate on milk at this distance is 10½ cents per 10-gallon can—virtually a cent a gallon. This rate includes 2 cents toll collected by the State harbor commissioner from the transportation companies.

No figures of monthly supply are available, but the following contributions by counties are given for the year 1899:

Counties.	Gallons.	Counties.	Gallons.
Napa	10,950	San Mateo	2,224,675
Solano	68,520	San Francisco	4,546,075
Alameda	143,080	San Joaquin	586,588
Contra Costa	216,445		
Santa Clara	235,790	Total	11,100,293
Sonoma	850,150	Average consumption per capita per annum	29.9
Marin	2,217,720		

The system of charging for transportation is a certain charge per 10-gallon can for the same shipping point.

The following special commodity rates are in effect, on less than carloads, by passenger train, to San Francisco station:[1]

From—	Size of can.	Per can.
	Gallons.	*Cents.*
San Bruno	3	3
Do	5	5
Do	10	10
Millbrae	3	3$\frac{3}{10}$
Do	5	5¼
Do	10	10½

Current Western classification provides, milk and cream in cans, owner's risk of leakage and weather, or released, less than carloads, first class for freight-train service and one and one-half times first class for passenger-train service.

The map following gives an idea of the territory from which the regular daily supplies are drawn.

There is no general organization or combination among the milk-distributing interests of San Francisco, but they have frequently cooperated among themselves and held meetings to consider questions that arose where their interests were at stake, as when municipal and other regulations affecting their interests were being considered. So far as can be learned, no effort on their part has been made to regulate the price, either wholesale or retail, and competition is keen. There are in the city directory the names of 156 milk retailers.

In regard to prices, the retailers usually secure it by contract from producers in the country, the price being uniformly 10 cents per gallon, f. o. b. The retail price is usually $2.50 per month for a quart delivered daily, but the system of selling a number of tickets at 5 cents each and calling for a quart is in common use.

9. THE MILK TRADE OF YORK, PA.[2]

This city of 30,000 inhabitants represents a wealthy farming section in which the competition of western grain has never succeeded in making cereal farming unprofitable. Consequently dairying has never taken root. There is another reason why this city has been selected as one entitled to a special inquiry. It is a typical city in point of the direct relations between producers and consumers of farm products. Its mills consume all or more than all the surplus grain; its industries are of such an unusual variety that there is hardly a product of the farm that does not find a consuming market right at home. Thirdly, it is typical as embodying public market houses as meeting points between producers and consumers. On this account the retail prices of farm products to consumers are

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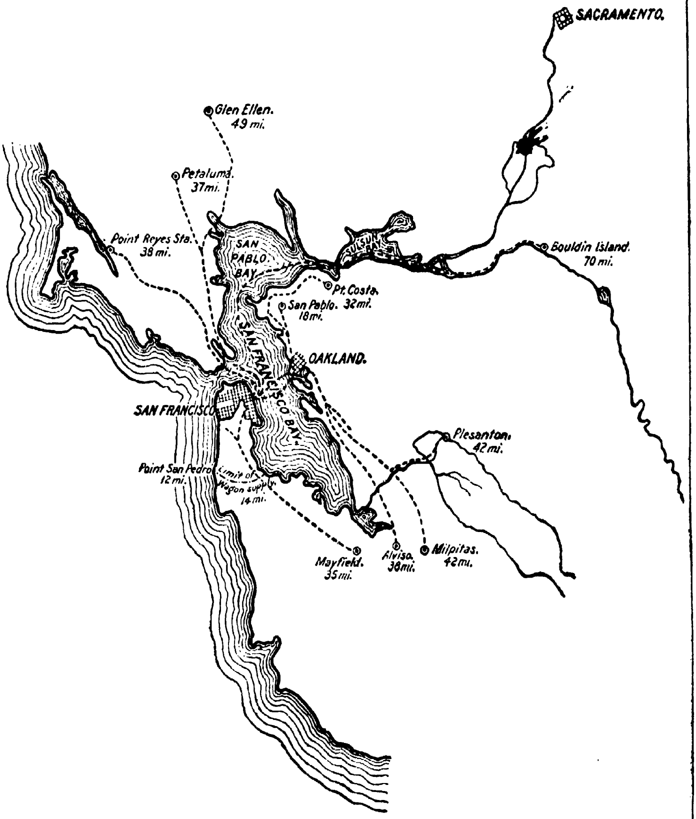
[1] Furnished through kindness of A. D. Shepard, general freight agent, Southern Pacific Company.

[2] Reported by Mr. J. H. Crowell, special agent, York, Pa.



MILK MAP
OF
SAN FRANCISCO, CAL.,
SHOWING
Productive Area of Supply.

lower, and producers in no portion of the United States are, in the long run, more prosperous. The conclusion forced upon one acquainted with the facts must at least be true, that where producers and consumers are able to deal directly the low cost of living is entirely consistent with a high degree of productive prosperity.

The household milk demand of this city takes only a portion of the supply. Besides condensaries, there are immense candy factories and biscuit and cracker factories which consume vast quantities of milk. The product is handled somewhat as follows: The producers, who are grain farmers as a rule, dispose of their supply (1) by retail (*a*) by retail milk routes, (*b*) by retail at markets; (2) by wholesale (*a*) to retail milk-route dealers, (*b*) to hotels and restaurants, (*c*) to ice-cream factories, (*d*) to candy factories, (*e*) to cracker, and biscuit and cracker factories.

The supply for retail distribution is brought to the city entirely by trains, direct from the producer. By some producers the delivery is made once a day, in the morning; others make two deliveries, especially in summer, morning and evening. Only in two instances do manufacturers of candy and crackers, who buy direct by wholesale from producer, have cream and milk shipped by rail.

The territory from which the milk supply of the ice cream, cracker, and candy factories, and retail dealers draw their regular milk supply has a radius in all directions from the city of from 5 to 7 miles. Milk and cream sold at the markets, however, are brought in some instances from points 14 miles distant. The milk and cream sent by rail are all forwarded from points within 15 miles.

There are three sources of milk supply. Besides the adjacent farms and the railway supply is the farmers' market supply. Many producers who attend the city markets sell milk in a retail way. They pay no other than the market license. The result is that milk sells for 1 cent and cream 8 cents per quart less than the route retailers' price.

A uniform price prevails here throughout the year.

Date.	Product.	Consumer pays per quart.	Producer receives per quart.	Expenses of distribution per quart.	Per cent to distributers.	Per cent to producer.
		Cents.	*Cents.*	*Cents.*		
January, 1900	Milk	5	2½	2½	50	50
July, 1900	do	5	2½	2½	50	50
January, 1900	Cream	20	15	5	25	75
July, 1900	do	20	15	5	25	75

The above table presents the standard prices of all persons belonging to the Milkmen's Association. A few route dealers, however, and those who sell at markets, sell at 4 cents per quart.

Farmers have not combined either in the wholesale or retail milk trade. Those farmers who have milk routes in the city have joined the Milkmens' Association, which has in almost all cases resulted in an advance of 1 cent per quart in retail price. Prior to organization some but not all of them retailed at 5 cents per quart.

The trade is not, however, in any respect under the control of a combination of dealers, and no influence other than ordinary competition is brought to bear upon anyone endeavoring to establish a milk route. The only effect of the formation of the Milk Dealers' Association was the slight enhancement of the price to the consumer; no change in price to producer resulted. A number of the farmers in the immediate vicinity of the city have milk routes of their own and deliver their own product. These milkmen, however, belong to the Milkmens' Association, are licensed dealers, and sell at association prices. The producers sell directly to the retail dealers. The essence of the contract is that the retailer shall take the entire product of the producer throughout the year, for which a stipulated price, the same the year round, is to be paid.

Hotels and restaurants are generally supplied by producers who have milk routes in the city, the price being about three-fourths of the retail rate.

Factories—ice cream, candy, and cracker—in general buy direct from the producers at prices equal to those paid the producer by the retail dealer.

There are no commission houses handling milk and but one wholesaling house—i. e., a caramel factory, which, having on hand large stores of milk constantly, provides the retailers in case of shortage. Each retailing milkman pays a city license of $2. There is no milk inspection other than that exercised by the city board of health, which may, in case the product is suspicioned as unhealthful, have the milk examined and condemned. No inspection as to quality exists.

Milk routes are not districted or confined to any locality; they may, and sometimes do, extend over half or three-fourths of the city. This is caused by the superior product in some cases and by removals of customers from one part of the city to another, and other minor causes. In a residence section of 25 blocks there are in some instances 15 different milk routes.

There are 5 public markets in the city for the sale of farm products and at all of these milk and cream are sold. The sale of milk and cream, however, is in almost every case from producer to consumer, as regular milkmen do not attend these markets.

There is no small cold storage excepting small cold-storage capacity at certain manufacturing plants which are not accessible to the public. In the case of the retailers, refrigerators take the place of cold storage. This means of preservation reduces the loss to a minimum. The percentage of depreciation in handling is very low, being less than 1 per cent.

10. EXPENSES OF DISTRIBUTING MILK IN SMALLER CITIES AND TOWNS.

This being an article of daily consumption and having to be supplied regularly in small quantities at the door or at a near-by grocery, the amount of handling required per unit of value is very large compared with other articles of family use. This fact, together with the liability of milk to deteriorate rapidly within a short period, may account for the comparatively high cost of retail distribution in the towns from which returns were received.

The retail price of milk in smaller towns throughout the greater part of the United States varies from 5 to 10 cents per quart, delivered at the door. Ten cents is rather the exception and 5 cents the rule. In most cases the summer and the winter rates are identical, but not always so. The difference is seldom more than a cent a quart, and even this rise must be occasioned by some special scarcity.

The milk supply of small towns of good agricultural situation is generally of high quality and low price. The producer being his own distributer comes in direct contact daily with the consumer—a relation which is of value in maintaining the quality. The supply being far in excess of the demand, the consumer has the choice of rival retailers at any time. These conditions result in the consumer in small towns being served at a less expense more directly with the best quality of milk than almost any other community of consumers. In towns of the size of Lincoln, Nebr., families receive milk the year round at 5 cents delivered, the retailer being the producer except when his supply is inadequate. Then he buys from his neighbors, making the greater part of his profit, it is said, not by a difference between wholesale and retail prices, but by extracting part of the cream before retailing. The proximity of the creamery is responsible for this method of making a retail profit. Even then, the appearance of a wholesale price is no evidence that a wholesale establishment for handling milk exists. Hotels and restaurants taking milk by the can, rather than by the quart, as families do, get it at wholesale prices on account of the larger quantity taken.

Wholesale and retail prices of milk in towns.

City.	Population.	Wholesale prices, per quart.	Retail prices, per quart.	Expenses of retailing milk supply, per quart.	Per cent of consumer's cost to retailer.
		Cents.	*Cents.*	*Cents.*	
Argentine, Kans	7,000	3¾	5	1¼	25
Chanute, Kans	5,500	....	5	....	....
Cheyenne, Wyo	12,000	4 -6	6	2	33
Eldorado, Kans	4,500	....	5	....	....
Fort Smith, Ark	22,000	....	6¼- 7½	....	....
Galena, Kans	15,000	3¾-6¼	5 -10	1¼-3¾	25-37
Hutchinson, Kans	12,000	2¼-3¾	5	2½-1¼	50-25
Hannibal, Mo	15,000	2½-3	5 - 6¼	2½-3¼	50-52
Independence, Kans	5,000	3 -4	5 - 6¼	2 -2¼	40-36
Iola, Kans	8,000	....	5	....	....
Junction City, Kans	5,000	....	5	....	....
Jackson, Tenn	18,000	....	6¼	....	....
Keokuk, Iowa	18,000	....	5 - 6¼	....	....
Leadville, Colo	15,000	8	10	2	20

Wholesale and retail prices of milk in towns—Continued.

City.	Population.	Wholesale prices, per quart.	Retail prices, per quart.	Expenses of retailing milk supply, per quart.	Per cent of consumer's cost to retailer.
		Cents.	*Cents.*	*Cents.*	
Lawrence, Kans	12,000	....	5	....	....
Newton, Kans	8,000	....	5	....	....
Ogden, Utah	22,000	1⅞	5	3⅛	63
Ottawa, Kans	8,000	....	5	....	....
Parsons, Kans	10,000	....	5	....	....
Sioux Falls, S. Dak	15,000	3	5	2	40
Beverly, Mass	13,000	3½	6	2½	42
Bradford, Pa	....	5 -6	5 - 6	....	....
Cumberland, Md	20,000	5	6	1	16
Concord, N. H	17,000	5 -6	5 - 6	....	....
Hornellsville, N. Y	15,000	2½	5	2½	50
Ithaca, N. Y	13,000	3 -3½	5	2 -1½	30-40
Kalamazoo, Mich	30,000	2 -3	5 - 6	3	40-50
Lebanon, Pa	18,000	....	6	....	....
Lansing, Mich	18,000	....	5	....	....
Millville, N. J	12,000	6 -8	6 - 8	....	....
Massillon, Ohio	14,000	....	5 - 6	....	....
North Adams, Mass	21,583	....	5 - 6	....	....
Northampton, Mass	17,000	2½	5 - 6	2½-3½	50-58
New London, Conn	19,000	5	6	1	16
Oil City, Pa	15,000	3	5 - 7	2 -4	40-57
Pittsfield, Mass	22,000	....	5 - 7	....	....
Quincy, Mass	11,000	1½	6 - 7	1½-2½	25-36
Shamokin, Pa	18,000	5	6	1	16
Alexandria, Va	24,000	3 -3½	6 - 8	3 -4½	50-56
Cairo, Ill	20,000	1¼-5	5	¾	18
Jacksonville, Fla	33,000	6¼	10	3¾	38
Moline, Ill	20,000	....	5	....	....
Paducah, Ky	20,000	5	5	....	....
Raleigh, N. C	18,000	....	6	....	....
Roanoke, Va	24,000	2½-3	4 - 5	1½-2	38-40
Richmond, Ind	22,000	....	5	....	....
Shreveport, La	50,000	....	10	....	....

11. SPECIMENS OF MILK CONTRACTS.

The following blank specimens of agreements between producers and distributers indicate the character of the contract used:

[Specimen No. 1.]

This agreement, made and entered into this —— day of ———, 190—, by and between the Howell Condensed Milk and Cream Company, of the town of Goshen, Orange County, N. Y., parties of the first part, and ——— ———, of the town of ———, county and State aforesaid, party of the second part,

Witnesseth, that the said party of the second part, for and in consideration of the covenants hereinafter contained and to be kept and performed by the said parties of the first part, agrees as follows:

That he will sell and deliver to the parties of the first part for the period of ———, beginning on the —— day of ———, 190—, and ending on the —— day of ———, 190—, all the milk produced from the dairy of the second party, not to be less than ——— quarts daily.

That the milk is not to be delivered later than 8 a. m. in the summer months, and 9 a. m. in the winter months, or at such other time or times as the said parties of the first part shall direct.

That the night's milk shall not exceed 52° F. when kept at home and delivered at factory.

That it shall not be made from fermented feed, ensilage, brewers' grains, sprouts, slop feed, turnips, cabbages, or any feed hereafter named and prohibited by parties of the first part.

That no milk will be taken and delivered from an unhealthy cow, or cows not milked twice daily; the milk shall be delivered in a pure and unadulterated state; that none will be delivered that has been taken from a cow five days before or five days after calving; that the cow shall not be supplied with impure or stagnant water; that no grease of any kind be used upon the teats when milking; that utensils, pails, strainers, and cans shall be cleaned with scalding water and kept clean and well aired, also the milk cans are to be cleaned on the outside by the party of the second part and placed on a rack, top down, in an inclined position, outside of stables; that cans are not to be used for *cider* or any other purpose except the delivery of milk; that the night's milk shall be placed in cans with lids off and then placed in cold water immediately after milking and stirred until cooled below 60° F.; that no milk shall be removed from a can after it has once been poured in; that the milk shall not be left overnight in or near the stables; that night's and morning's milk be kept separate, and be delivered in separate cans and under no circumstances be mixed; the parties of the second part to deliver their milk covered with blankets in both winter and summer months. All milk delivered in pursuance of this contract shall contain not less than 3¾ per cent butter fat and 12½ per cent total solids.

The parties of the first part reserve the right at any and all times during the continuance of this contract to reject and refuse any and all milk delivered if not satisfactory to them, and their decision upon that point to be final; also in case of accident to machinery, or fire.

It is further understood that the parties of the first part shall have the right to enter the premises of second party and examine the manner of producing milk, and shall have the right to test same.

And the parties of the first part, in consideration of the covenants hereinbefore contained, hereby agree to purchase and receive from said second party the milk produced from the dairy of the said second party during the continuance of the contract, and pay therefor the following prices, the same to be paid each month following the month of delivery of said milk, any day on or before the ——— day, at the option of the parties of the first part.

Prices to be paid as follows: ———.

In witness whereof, the parties have hereunto set their hands and seals the day and year first above written.

——— ———.

——— ———.

[Specimen No. 2.]

We, the undersigned, having read the same, do hereby severally ratify and confirm the contract for the sale of milk to Thomas J. Gleason and assigns, parties of the second part, made by us through Jonathan C. Latimer, Ira L. Snell, and Frank B. Aiken, as our attorneys in fact, and dated October 6, 1899, and we hereby consent that said parties of the second part, until November 15, 1899, may take from us only so much milk as he or they may call for.

[Signatures of producers.]

Memorandum of contract entered into this —— day of ———, 1899, by ———, ——— each owning the number of cows represented by the figures set after his name, and delivering milk at ———, county of ———, State of ———, and executing this contract as one of the parties of the first part by Jonathan C. Latimer, Ira L. Snell, and Frank B. Aiken, their several and individual attorneys in fact, and Thomas Jay Gleason, of the city of New York, and assigns, party of the second part.

Whereas, the parties of the first part have, by powers of attorney, appointed Jonathan C. Latimer, Ira L. Snell, and Frank B. Aiken their agents to contract for the sale of, and to sell all the milk produced by them, said parties of the first part, for a term not longer than five years, and at a price not less than two and three-quarters (2¾) cents per quart for milk produced during the months of October, November, December, January, February, and March; and one and three-quarters (1¾) cents for milk produced during the months of April, May, June, July, August, and September; payments to be made monthly, on or before the 10th day of each month, for all milk delivered the month previous. Milk to be of standard quality and delivered in good condition at shipping and receiving stations; and

Whereas the party of the second part is ready and willing to purchase from each of the parties of the first part the milk above referred to at a price in excess of the minimum price at which the parties of the first part have authorized their agents to sell the same, on the terms and conditions herein expressed:

1. The parties of the first part do severally agree to sell and deliver to the said party of the second part, or his assigns, all the milk produced from the cows owned or controlled by them severally, except the milk used in their homes, for a term of five years beginning on the first day of November, 1899, at the following prices:

Three (3) cents per quart for all milk delivered in the months of November, December, and January.

Two and three-quarters (2¾) cents per quart for all milk delivered in the months of February, March, and October.

Two and one-half (2½) cents per quart for all milk delivered in the month of September.

Two and one-quarter (2¼) cents per quart for all milk delivered in the months of April and August.

Two (2) cents per quart for all milk delivered in the months of May and July; and

One and three-quarters (1¾) cents per quart for all milk delivered in the month of June.

And to deliver the same to the parties of the second part or his assigns at the station designated in the powers of attorney hereinbefore referred to, or at the milk-shipping station most convenient to said party of the first part.

2. The parties of the first part do severally further agree that the party of the second part or his assigns may retain from the purchase price to be paid for said milk, one-quarter (¼) of one cent per quart for the first two years of this contract and apply the same on account of the several purchase and payment by each of said parties of the first part of nonassessable 7% preferred stock (at par) of the company to be formed to conduct the business of buying and selling the milk obtained pursuant to the powers of attorney above referred to, and this contract. And the said parties of the first part do hereby severally subscribe for as many shares of said stock as the one-quarter (¼) of one cent per quart so retained shall pay for.

Provided that the amount of said stock to be set aside for the foregoing purpose shall not be less than the par value of $2,500,000, of a total issue of $10,000,000 of preferred stock.

Provided that receipts or certificates, negotiable in form, shall be issued to each of the parties of the first part upon demand, as and when the one-quarter of one cent per quart above referred to amounts to $10 or a multiple thereof.

3. The party of the second part and assigns agree to pay for the milk in cash, except the one-quarter (¼) of one cent per quart retained for stock, as herein provided, cash payments to be made monthly on or before the 10th day of each month, for milk delivered the month previous, stock payments as and when said stock is paid for, and to receive and cool said milk at all points where it is now received, and to furnish each and several the parties of the first part cans in which to bring said milk to the station, upon the party of the first part depositing an amount of money equal to the value of said cans with the party of the second part or his assigns, which said deposit shall be returned to said party of the first part upon his final delivery of said cans to said party of the second part or his assigns in good condition, ordinary wear and tear excepted; and to wash all cans free of expense to the party of the first part.

4. The party of the second part and assigns further agrees that should any of the parties of the first part desire at any time to pay cash for their proportion of said preferred stock, they may do so and have said stock issued to them at once, thereafter receiving cash for their milk at the full prices hereinbefore mentioned.

It is further agreed between each of the parties of the first part and the party of the second part and assigns, as follows:

5. That the prices of milk hereinbefore mentioned are based upon the freight paid on milk brought from what is known as the long-haul territory, and that all milk from territory inside the said long-haul zone or territory shall be allowed the benefit of the difference in freight rates.

6. That when any milk-shipping station is owned by one or more of the parties of the first part, other things being equal, it shall be used in preference to any other station.

7. That none of the parties of the first part shall be held liable for damages on account of the nondelivery of milk under this contract, so long as he produces no milk.

8. That should any of the parties of the first part fail to keep their stables or cows in a proper sanitary condition, or do or permit anything that would render the milk unhealthful or unfit for use, or fail to comply with any of the requirements of law, then and in that event the party of the second part, or his assigns, may refuse to receive such milk. And if said default and failure to comply with the foregoing condition shall be continued, then, at the option of the party of the second part, or his assigns, all rights under this contract shall be forfeited.

9. That nothing herein contained shall be construed in any way to be a personal contract or obligation of the said Jonathan C. Latimer, Ira L. Snell, or Frank B. Aiken, nor shall they be held personally liable for any failure or refusal of any of the parties for whom they act to perform any part of this contract or

for any errors or mistakes in or on account of the powers of attorney and list of the parties of the first part, or for anything growing out of this contract.

In witness whereof the parties of the first part, by Jonathan C. Latimer, Ira L. Snell, and Frank B. Aiken, and the party of the second part have hereunto set their hands and seals the day and year first above written.

[Specimen No. 3.]

"Borden's" New York Condensed Milk Company's milk contract.

This agreement, made this —— day of ——, between the New York Condensed Milk Company, party of the first part, and each of the undersigned, parties of the second part,

Witnesseth, that each of the parties of the second part, for himself and not for the others, for and in consideration of the sum of one dollar to him in hand paid and of the amounts hereinafter named to be paid to them respectively by the party of the first part on the fifteenth day of each month following the month of delivery, hereby agrees to sell and deliver daily to the party of the first part, on the platform at its factory at ——, the number of pounds of good, pure milk produced from his or her individual dairy or dairies, as specified below, at such hour as shall be named by the party of the first part.

And does also agree that the milking of his or her cows shall be done in the most cleanly manner, and that the milk shall be strained through wire-cloth strainers of 100 meshes to an inch and thoroughly cooled immediately after it is drawn from the cow, by frequently stirring the same until the animal heat is expelled and the temperature of said milk is reduced to 58 degrees inside of 45 minutes, by placing the can in which it is contained in a vat of cold water, the water to be of sufficient depth to come up to the height of the milk in the can, and said vat shall contain at least three times as much water as the milk to be cooled, and that the water of said vat shall be renewed daily, in sufficient quantities to prevent any fouling or smell; that in winter weather said vat shall be guarded against freezing, and great care shall be used to protect the milk, during and after cooling, that it shall not become frozen, and shall not exceed 60 degrees when delivered at the factory.

And does also agree that the bath and supply of water shall be arranged to let the water flow over the top to carry off the warm water, and that the can or cans in which the milk is cooled shall be placed in water immediately after milking and shall remain therein until the process of cooling shall be finished and the time arrives for hauling same to factory; that the milk shall be transported to factory on suitable spring wagons, and that the cans shall be covered with clean canvas covers.

And does also agree that the room in which the milk is kept and cooled shall be used for no other purpose; that it shall be properly ventilated and be separate and apart from the stable in which cows, horses, or any other animals are kept; that the entrance to said room shall not be through a partition or door opening directly from the stable, but from without.

And does also agree to exercise the utmost care to keep the milk and cans free from impurities of any kind soever; that the cans shall be carefully examined and thoroughly rinsed with clean water before any milk is placed therein; that the night's and morning's milk shall not be mixed, excepting the remnants of each milking, which may be placed in a can of suitable size and so designated.

And does also agree to deliver all the milk, including strippings, at the first delivery at the factory after it may be drawn from the cows, and not hold over any portion thereof and deliver or attempt to deliver the same at a subsequent time, and that no milk shall be delivered or offered for delivery taken from a cow that has calved within ten days, or from a cow which will come in or calve within sixty days, or from cows in an unhealthy condition.

And does also agree that when the cans are not in use they shall be turned down on a rack at least three feet above the ground, with covers off.

And does also agree that if the party of the first part, its inspectors or representatives, shall have reason to suspect from any cause that water has been added, or that any part of the cream has been removed, or that the milk has not been cooled as provided, or that it has been injured by carelessness or contamination, or if it finds the cans unclean, it shall have the right to refuse such milk, or any further quantity of milk, from the party of the second part.

And does also agree that should any member of the family or servant thereof be sick with any infectious disease to immediately notify the party of the first part.

And does also agree that whenever in the judgment of the party of the first part it may be deemed necessary by them to cause an inspection of the herd or herds of the party of the second part by a veterinary or sanitary inspector, it shall be their privilege to do so; and if after careful inspection any cow or cows are found to be suffering with any contagious or infectious diseases or with any malady which, in the judgment of said veterinary or inspector, would of necessity render the milk unwholesome for human food, the party of the second part agrees that all such cows shall be removed from the herd, either temporarily or permanently, as in the judgment of said veterinary or inspector such removal may be necessary or conducive toward producing wholesome milk. It is agreed, however, on the part of the party of the first part that there shall be no needless sacrifice in any herd, and that sufficient evidence of the existence of noxious disease shall be produced to warrant the removal of any cow. It is furthermore agreed on the part of the party of the second part that during the months in which the cows are stabled special care shall be taken to remove daily all manure and everything of a foul or uncleanly nature from the stables, and that no horse or other manure shall be used for bedding, and that every precaution will be taken to prevent dust, dirt, hay seed, or any foreign substance from falling into the milk pails while in the act of milking.

And does also agree not to feed cows on turnips, wet or dry barley sprouts, brewery or distillery grains, linseed meal, glucose refuse, starch refuse, buffalo feed, ensilage, rancid oil cake, gluten meal, or any feed which will impart a disagreeable flavor to the milk, or which will not produce milk of standard richness.

And does also agree that the inspectors or representatives of the party of the first part shall, at all times, have access to and the right to examine the place for keeping the cows and for milking them, and the place for cooling the milk and keeping the pails and strainers; and that the stables and sheds for keeping the cows shall be thoroughly lighted with windows and ventilated, and whitewashed throughout during the first two months of this contract.

The party of the first part agrees to clean and steam at the factory, free of charge, the inside of all cans in which milk is brought, but the party of the second part agrees to keep his or her respective cans clean and bright on the outside. The pails and strainers employed in the dairy shall be kept thoroughly clean, and shall be scalded in boiling water and dried morning and night.

It is further understood and agreed that if any serious interruption to the trade or to the manufacture should occur, or any accident to the works of the company occur to hinder the process of manufacturing, or bottling, or if the usual facilities for transportation by any cause be interrupted or if any restriction by legally constituted authority renders the carrying on of the manufacture, or bottling, impracticable, then the said party of the first part shall immediately give notice of the fact, and thereafter it shall be under no obligation to receive milk from the party of the second part under this contract, and this contract shall thereupon be considered terminated and void.

It is also understood and agreed that the party of the first part shall be under no obligation to receive any milk under this contract unless an aggregate weekly average of one hundred and twenty-five thousand pounds shall be signed by the parties of the second part.

Daily average to be delivered ——— lbs. at ——— per 100 lbs. for the month of April, 1899.

Daily average to be delivered ——— lbs. at ——— per 100 lbs. for the month of May, 1899.

Daily average to be delivered ——— lbs. at ——— per 100 lbs. for the month of June, 1899.

Daily average to be delivered ——— lbs. at ——— per 100 lbs. for the month of July, 1899.

Daily average to be delivered ——— lbs. at ——— per 100 lbs. for the month of August, 1899.

Daily average to be delivered ——— lbs. at ——— per 100 lbs. for the month of September, 1899.

In witness whereof the parties have hereunto interchangeably set their hands the day and year first above written.

12. CONDENSERY PRICES, FIFTEEN LOCALITIES, BEGINNING APRIL 1, 1900.

BORDEN'S, AT ELGIN, ILL.

	Per 100 pounds.	Per quart.	Per can, 40 quarts.
		Cents.	
April	$1.05	2.25¾	$0.903
May	.90	1.93½	.774
June	.80	1.72	.688
July	.90	1.93½	.774
August	1.05	2.25¾	.903
September	1.20	2.58	1.032

BORDEN'S, AT NORWICH, N. Y.

April	$1.10	2.36½	$0.946
May	.90	1.93½	.774
June	.80	1.72	.688
July	.90	1.93½	.774
August	1.10	2.36½	.946
September	1.25	2.68¾	1.075

BORDEN'S, AT JOHNSONS, N. J.

April	$1.20	2.58	$1.032
May	1.00	2.15	.86
June	.80	1.72	.688
July	.95	2.04¼	.817
August	1.10	2.36½	.946
September	1.30	2.79¾	1.118

ANGLO-SWISS, AT MIDDLETOWN, N. Y.

April	$1.20	2.58	$1.032
May	1.00	2.15	.86
June	.80	1.72	.688
July	.95	2.04¼	.817
August	1.00	2.36½	.946
September	1.30	2.79½	1.118

Patrons have the choice of accepting either these figures or the net price as named from month to month by the New York Milk Exchange.

An addition of 10 cents per 100 pounds will be paid for all milk that yields 4 or more per cent of butter fat.

Bordens pay the same at Norwich, Mount Upton, New Berlin, Oxford, and Delhi, while at Wallkill, Florida, Millerton, Wassaic, and Brewsters they correspond with the prices paid at Johnsons.

The Howell Condensed Milk Company, at Goshen, will pay the net price as named from month to month by the New York Milk Exchange, and the Orange County Milk Association at Goshen buys on the same terms.

13. THE MILK SUPPLY OF BOSTON.[1]

(1.) *Cars.*—Three-fourths of the milk supply of the Greater Boston reaches the city by railroad. The longest direct run is 140 miles, and some railroad milk comes only 20 miles. Most of this milk is conveyed in cars built for this especial purpose, with refrigerator closets for the cans of milk and with provision for steam heat. Thus refrigeration in summer and warming in winter are provided. Some of the cars have an office room provided with chairs, desk, and pigeonholes for the use of the man in charge of the car. Here he has all needed conveniences for keeping record of the milk taken at the different stations, and other necessary accounts.

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[1] The following account of the Boston milk trade is taken from Commissioner G. M. Whitaker's excellent report on the "Milk supply of Boston and other New England cities," United States Department of Agriculture, 1898.

These cars are leased from the railroads by wholesalers. These wholesalers furnish the car men, ice, and other supplies; the railroad hauls the cars on passenger trains or in special milk trains, according to convenience in individual cases. Most of the cars start in the morning, from 4 to 6 o'clock, and reach the city between 10 and 11. In a few instances the car starts the afternoon previous, and is on the road overnight, reaching Boston during the next forenoon. The cars, in the summer, frequently take the milk of the same morning; some start too early for the milk of that morning, especially in the winter, and hence bring the milk of the previous day. Milk is therefore 18 to 30 hours old before reaching the city. The number of these milk cars averages about 35, although varying somewhat with the season.

(2.) *Cans.*—The milk sold in Boston is shipped in 8½-quart cans, with a handle on one side and turned wooden stopples. The quart is, by statute, the wine measure quart.[1] No one in the trade to-day can tell why this size and shape of cans was originally adopted. The advantages claimed for them are: Convenience in handling, convenience in retailing (as many customers buy one or two cans), convenience to many small farmers, who can fill only two or three cans per day, convenience in transportation (as the cans can be stacked several tiers high), cleanliness in retailing where milk is poured from the can, as it is sooner emptied than a 40-quart can, and hence the milk is exposed to the air and dirt a much less time.

The members of the Milk Contractors' Association report monthly their receipts, sales, and surplus.

We give below some tables on this subject, the figures representing the number of 8½-quart cans:

Year.	Receipts.	Sales.	Surplus.
1892	9,212,667	7,315,135	....
1893	9,263,487	7,619,722	1,643,765
1894	9,705,447	7,657,421	2,048,026
1895	9,856,500	8,040,732	1,815,768
1896—January	844,709	651,827	192,882
February	808,383	611,793	196,590
March	871,572	657,039	214,534
April	891,275	672,561	218,714
May	1,005,115	696,599	308,516
June	994,817	675,796	319,021
July	899,397	712,188	187,209
August	854,913	687,224	167,689
September	866,691	635,092	231,599
October	960,734	699,245	261,489
November	885,903	690,920	194,983
December	898,599	707,095	191,504
Total	10,782,108	8,097,379	2,684,730
1897—January	923,852	705,324	218,528
February	835,115	639,952	195,163
March	960,084	719,814	240,270
April	976,996	733,298	243,698
May	1,105,325	759,875	345,450
June	1,115,234	752,038	363,196
July	1,013,552	789,849	223,703
August	966,058	720,374	245,684
September	956,445	732,795	223,650
October	1,037,764	751,944	285,820
November	962,552	708,459	254,093
December	945,254	724,850	220,364
Total	11,798,231	8,738,572	3,059,619

(3) *Milk Producers' Union.*—Before going on to speak further about the prices of milk and some of the detailed methods of handling it which are peculiar to Boston, a word should be spoken about the Milk Producers' Union. This is an organization of the farmers who sell milk to the contractors. The farmers of the several shipping towns form a local organization and send delegates to an annual meeting of the central union, which elects executive officers and transacts other necessary business. The organization has been in existence in one form or another since 1886. The work of the union, which has been supplemented by that of the

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[1] One quart, wine measure, is 57¾ cubic inches, or 2 pounds 1⅓ ounces of water, and 2 pounds 2¾ ounces of milk.

association of wholesalers, who regulate the business from their end, has been to promote uniformity and businesslike methods. The tabulation and publication of the above statistics were brought about through the combined efforts of the Milk Producers' Union and the Milk Contractors' Association. The prices of milk are usually arranged by mutual agreement between the contractors and the officers of the Milk Producers' Union. Blanks are sent semiannually to the producers belonging to the union, on which they express their opinion as to the price of milk and state the number of cans shipped. These replies are averaged on the basis of cans rather than individuals; and the negotiations between the contractors and the union are based upon this expression of opinion.

The union has the machinery in its constitution for ordering a strike, so to speak, in case of an emergency. Two or three times in the history of the union a rupture of this kind has seemed imminent, but it has been averted for the best interests of all, usually by mutual concessions, so that the farmers have gained directly by having an organization. They also feel that they have gained some unfought battles, and believe that they have generally been treated better by the contractors by reason of having an association than they would have been if the contractors were dealing with individuals, or simply issued an ultimatum of what they would pay for milk without their authority being questioned. At times some farmers have been dissatisfied with the work of the union because it was not more radical and sweeping, but in the main the more conservative farmers feel that it has been of great service to them. The existence of such an organization has tended to promote uniformity in prices, and there has been little variation in prices for a number of years.

(4) *Prices paid.*—As milk is shipped from stations of varying distances from the city, the following arrangement has been made as a convenient method for determining a price for each station. It has been agreed between the contractors and the Milk Producers' Union that all negotiations should be for a theoretical Boston price per can, and that there should be the following discounts from that price:

	Cents.
For stations between 17 and 23 miles from Boston	8
For stations between 23 and 36 miles from Boston	9
For stations between 36 and 56 miles from Boston	10
For stations between 56 and 76 miles from Boston	11

And 1 cent more for each additional 20 miles.

The price is adjusted twice a year for the 6 months beginning April 1 and October 1. The theoretical Boston price per can of 8½ quarts for a number of years has been as follows:

Year.	Summer.	Winter.	Year.	Summer.	Winter.
	Cents.	*Cents.*		*Cents.*	*Cents.*
1886	30	36	1893	33	37
1887	30	36	1894	33	37
1888	32	38	1895	33	37
1889	32	38	1896	33	35
1890	32	36	1897	33	35
1891	33	37			
1892	33	37	Average (12 years)	32¼	36⅞

The increase of winter dairying has been caused not only by the increased profit in winter milk, but, to a certain extent, in market-gardening sections, by the desire of farmers who produce milk to carry more cows in the winter, in order to get manure for their garden crops.

Payments to the farmers for milk sold to the contractors are made monthly, as soon after the 1st of the month as the clerical work of closing the accounts and drawing checks can be done.

According to the agreement alluded to the payment per can of milk which the farmer would receive at his railroad station would be the theoretical Boston price less 8, 9, 10, or 11 cents, depending upon his distance from the city. The amount of milk handled by the contractors is so large that these prices govern to a considerable extent the dealings of many milkmen in other places.

When this arrangement was first considered, it was expected that the theoretical Boston price would be the figure at which milk would be sold to the peddlers, and that the discount would therefore represent cost of transportation, cost of doing the business, losses from bad bills, and profits; but competition of one kind and another has reduced the price to the peddlers so that they now pay 3 and 4 cents less than the nominal Boston price, and it has become wholly a theoretical figure, used and useful only as a number from which to subtract the various discounts depending upon distance of transportation. The expenses of doing the business and the profits to the contractors are therefore from 4 to 7 cents per can.

Milk was sold by the contractors to peddlers during the summer of 1897 at 30 cents per can, with rumors of cutting prices to 29 and even 28 cents. Milk is sold by the peddlers at varying prices. Hotels and large restaurants buy close and allow only 2 or 3 cents for handling. They bought during 1897 at 32 to 35 cents per can. Small stores, which retail by the quart the contents of only a few cans, pay 38 to 40 cents per can. Consumers of a can daily pay 45 and 50 cents, and those who have a quart of milk delivered at their houses daily by the milkman pay 7 cents per quart. Sometimes pint customers pay at the rate of 8 cents per quart. By going to the store, consumers frequently buy as low as 6 cents, and in some instances for 5. Milk in a few cases seems to be selected by grocers and provision dealers as an article to sell at cost or a little less as a bid for other business.

(5) *Contractor's surplus milk.*—As stated above, the contractors and the producers' union agree upon a price for 6 months in advance. In doing this the purchasing contractors seem to be taking some chances, for they can not foresee the demand. Particularly is this the case in the summer, for then the demand depends much on the weather, as a hot, sultry "spell" causes the consumption of milk to increase rapidly. Further than this, the contractors appear to take large chances in another way. They agree to take all the milk that the farmers supplying them with milk at the various shipping stations may produce. This leads to receipts largely in excess of the demand, as has been seen by the preceding tables of receipts and sales; the excess sometimes reaches one-fourth of the receipts. The contractors save themselves from loss by an arrangement by which the stipulated price is paid for only such milk as is sold again and for a small margin in excess (equal to 5 per cent of the sales; see above card). All surplus beyond this is made into butter by the contractors at their creameries on the farmers' account, allowing each month, as the value of the butter, the average of the jobbing price of butter quoted by the chamber of commerce during the month and charging 4 cents per pound for making. Thus the farmer is sure of getting at least butter value for all the milk he can make. To protect the farmers from an undue extension of this surplus privilege the contractors agree not to extend their routes or enlarge their territory The advantages of this surplus system are:

(1) The market is more steady than it would otherwise be. The figures above show that the price has been very uniform for many years. The surplus being in the hands of the large dealers does not get upon the market, and the supply offered to the retail trade by the contractors is never in excess of the demand.

(2) The contractors have a large reservoir to draw from when sultry summer weather or other cause increases the demand; hence the market is never short of milk.

(3) The farmers find a market for more milk than they otherwise would, though the surplus portion is sold at much less than the other part. The butter value of the surplus milk for the year 1896, less the cost of making, was 13 cents per can, a fraction over 71 cents per hundred pounds. For 1897 the butter value of a can of milk averaged 13⅓ cents, a little better than for 1896.

The disadvantage of the system is that it is the cause of much friction between the producers and the contractors. The surplus offers a good opportunity to increase the farmers' natural suspicion of the contractors. The application of the system is blind to many farmers, some of whom even question the honesty of the contractors in accounting for the amount of the surplus. This difference is further intensified by the method of settling with the farmers.

This system of buying all the milk that is offered furnishes shippers a market for all they can produce, but this in turn tends to increase the surplus, which reached unusual proportions during the years 1896 and 1897. This, coupled with the low price of butter, made the discount for those years more than twice what it had previously been. The records of milk meetings and farmers' gatherings show that the surplus is the great cause of dissatisfaction, the burden of many resolutions and speeches being that the contractors should buy "straight." The contractors have sometimes agreed to take all chances of surplus and pay a straight price if they could buy for 2 cents less. Before this system was introduced there was much complaint at the irregularity of the amount sold to the contractors. If the supply ran ahead of the demand the farmers would receive notice to keep back part of their supplies, and they were liable to be obliged to make butter or cheese in varying quantities every few days. This was a great inconvenience and caused much grumbling, which was remedied by the contractors adopting the present plan, taking all produced and paying butter price for the surplus. But that was so many years ago that the improvement is not generally remembered. The feeling against the surplus was so strong in 1889 that the matter was referred to the State board of arbitration, which decided that the principle was a sound one.

It should be stated here that the different wholesale firms report their receipts, sales, and surplus to their organization and to the milk-producers' union, and the discount is figured on the totals, being the same to all farmers at equal distances from the city, regardless of the contractors to whom they sell or the amount of surplus which their individual wholesaler may have had.

(6) *Retailing.*—On the arrival of the milk cars in Boston they are run onto the railroad sidings of the milk contractors from 9 to 11 o'clock a. m., regardless of the distance the cars have come. The peddlers by this time have finished their morning's distribution of milk and their wagons are backed to the contractors' platforms and sheds for the next day's supply. The cans are quickly transferred from the cars to the peddlers' wagons. In a few cases, where there are customers for several cans, a delivery is made at once, but most of this milk is carried to the different peddlers' headquarters. Here the milk is run through a large mixer, so as to insure uniform quality. Then it is drawn off into quart and pint cans of tin and placed on ice. The next morning about 2 o'clock the peddler starts out to deliver this milk to the customer, leaving at the door of tenement, flat, and dwelling house the can of milk, usually before the family is out of bed. By this it will be seen that the milk is in the city about 18 hours before reaching the consumer. The morning's milk is cooled by various methods, some employing ice, while not a few suspend the cans in a well. When the night's milk has been cooled a wooden stopper is placed in the full can, upon which is pasted a small adhesive stamp a trifle smaller than a postage stamp, and on this is printed the number of the dairy, as well as the number of the car conveying the milk from Bellows Falls to Boston.

As a rule neighboring dairymen have an arrangement by which one of their number takes the daily product to the main highway, where the cans are picked up every night by the milk wagon and the "empties" returned by the same conveyance in the morning. In some cases, however, the farmer lives 3 or 4 miles off the route, and of course is obliged to bring his own milk.

(7) *Boston system summed up.*—The advantage of this system of handling milk by large wholesalers combined into an association is that the business is in the hands of solvent parties, who can be relied upon to pay the farmers promptly the money due them. The business is done in a uniform, methodical way, all producers being treated alike. There is more publicity to the business than there would be if the milk were sold to a great many small, isolated peddlers. The existing Boston system maintains a more steady market than would otherwise be possible, by keeping off an undue surplus which would break the ruling price.

(9) *Present wholesale methods.*—Early shipments of milk were made by peddlers who brought into the city the milk which they needed for their retail trade. But as the business increased there happened what has taken place in every other industry—specialization. Handling milk at wholesale became a distinct business from retailing, and the men who brought in railroad milk came in time to devote the whole of their energy and capital to buying milk of the farmers, transporting it, and selling to retailers.

Various changes have taken place in the personnel of these firms of pioneer peddlers and subsequent wholesalers, but many of the names early identified with the business are still in use. Consolidations have also taken place, till to-day the business of transporting milk to the city by railroad is done by 7 concerns. Six of these 7 milk-wholesaling houses have an association for bringing about uniformity in methods of doing business and for mutual self-protection. To-day fully three-quarters of the milk supply of the Greater Boston passes through the hands of these large wholesalers, locally known as "contractors."

These contractors furnish the cans for the business and lease the cars of the railroads. They furnish men and supplies for the cars. In some cases they have loading platforms at shipping stations. At a number of convenient points in the country they have ice houses and cut their own supply of ice. In the city they have platforms, storehouses, refrigerators, offices, etc., near the railroad tracks, and their cars on reaching the city are switched onto the side tracks at their business depots. The loading and unloading is done by the contractors.

All of the contractors have cheese or butter factories in the city or country, or both, for the manufacture of butter and cheese.

The milk is bought in the country at a price for the milk delivered at the car at the different country railroad stations. In some instances each farmer carries his milk to the railroad station; in others, the farmers in one neighborhood or in one locality cooperate in an arrangement with one of their number to do the teaming; in yet other instances the contractors employ some one to haul milk from the farmers' doors to the railroad station, and deduct the expense from the amount due the farmers for milk. Milk is frequently drawn 6 miles to a railroad station, and in some cases as far as 10 to 15 miles.

The territory controlled by the several contractors is indicated in the following map of railway routes by which each of the contracting firms gathers its supply.

The map of Boston milk territory is part of Commissioner Whitaker's report published by the United States Department of Agriculture.

PART TWELFTH.

THE BROOM-CORN TRADE.

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1. PRICES AND EXPENSE OF MARKETING BROOM CORN.

Kansas is to be classed with Illinois and Nebraska in broom-corn production. The State board of agriculture reports an acreage of 33,424, a yield of over 14,000,000 pounds, or 7,000 tons, valued at $455,000. Allen, Cherokee, McPherson, Reno, Rice, Sheridan, Stafford, and Stevens counties have less than 1,000 acre each. Very little broom corn is manufactured in Kansas. In the vicinity of McPherson local buyers purchase the brush on orders from dealers and manufacturers in other parts of the country, or buy on their own account on speculation to sell as opportunity may arise. The shipments are sent to Kansas City, St. Louis, Chicago, Cincinnati, New York, Philadelphia, and of late a considerable quantity has gone to Georgia and to the Pacific coast. In October, 1898, Kansas broom corn sold to local dealers for $40 to $50 per ton; in January, 1899, in the spring it had advanced to $100 per ton, and one lot brought as high as $155 per ton, for shipment to Chicago.

The rate of commission in Kansas appears to be $2.50 per ton when local buyers purchase on orders—that is, the first charge on distribution is a 5 per cent commission, on the basis of $50 per ton. Illinois is one of the leading States in producing and manufacturing broom corn. The variableness of the yield is given in the statistics of production from 1877 to 1898.

The following table gives the area, yield, and value of the broom-corn crop of Illinois since 1876:

Broom-corn production in Illinois.

[From Illinois State Board of Agriculture.]

Year.	Acreage.	Average yield per acre.	Total yield.	Price per ton.	Value of crop.
		Pounds.	*Pounds.*		
1877	14,566	458	6,674,747	$71.20	$237,594
1878	18,258	614	11,218,168	49.50	277,645
1879	17,661	632	11,161,238	86.75	484,195
1880	18,652	775	11,457,176	77.10	559,447
1881	17,887	1,437	25,708,250	128.50	1,651,739
1882	43,036	225	9,693,187	80.00	387,680
1883	33,922	1,000	33,922,000	90.00	1,481,710
1884	25,173	750	16,228,000	72.00	585,572
1885	17,382	666	10,514,000	91.00	434,932
1886	37,633	526	19,914,000	78.00	776,963
1887	35,022	803	28,132,000	69.00	973,864
1888	41,807	672	28,116,000	57.00	797,245
1889	29,393	563	16,546,000	68.00	567,053
1890	27,591	1,020	28,152,000	64.00	904,311
1891	15,875	576	9,138,000	117.00	532,985
1892	28,333	587	10,756,000	94.00	508,699
1893	27,358	646	17,668,000	57.00	501,678
1894	28,042	716	20,074,000	89.00	889,459
1895	25,369	681	17,286,000	38.00	332,876
1896	25,543	587	14,994,000	54.00	407,446
1897	25,510	500	13,416,000	53.00	358,161
1898	23,976	667	15,780,000	55.00	431,705

Formerly large quantities of broom corn were shipped from Illinois to Massachusetts to be worked up in the small towns during the winter. Hadley was until recently prominent in this respect. The manufacturer, either in person or by representative, visited the broom-corn sections of the West and supplied himself with ample material for the factory for the winter or the entire year. The progress of combinations in broom-corn manufacturing has shifted to centers of consumption nearer to the sources of the raw materials. Northern Illinois (Chicago), southern Indiana (Evansville), and points in Ohio and New York are the leading centers of broom-corn manufacturing. In Evansville, Ind., a single establishment, whose proprietors organized a broom-corn purchasing trust, has succeeded in controlling the supply of broom corn so completely as to close up nearly every other manufacturing establishment not affiliated with the purchasing company.

The price of broom corn to other manufacturers has been placed at $200 per ton. The result is that other manufacturers have no alternative except to shut down. The expenses of getting broom corn from Arcola, Doran, Galatin, Humboldt, Mattoon, Tuscola, in central Illinois, to Evansville, where it is manufactured, has risen with the progress of the effort to control the trust. The freight was formerly 14 cents per 100 pounds, but with the rise in price the rate of freight rose to 20 cents per 100 pounds. At this rate the following is a fair statement of the expenses of handling the products from producer to manufacturer or consumer:

Expenses of handling broom corn.

Local buyer's charge per ton	$2.00
Freight to Evansville	4.00
Hauling from cars to warehouse	1.00
Storage	1.00
Total expenses per ton	8.00

The producer received in a number of cases $60 per ton. That seems to have been the prevailing figure at which the bulk of this crop passed out of the farmers' hands. From this we have the following proportions:

	Amount.	Per cent.
Cost to consumer	$68.00	100
Cost of distribution	8.00	12
Producer's proportion	60.00	88

If we take the average farm value of broom corn in Illinois at $55, and the railway rate at 14 cents per 100 pounds, the total distributive charges will be $6.80 per ton. On this basis the consumer at Evansville paid $61.80 per ton, and the producer received 89 per cent of the total value to consumer. Few farm products show so high a proportion for the producer. In keeping with the advance in price since the last crop was shipped, freights have advanced to 21 and 24 cents per 100 pounds. The primary effect of high prices is to increase the acreage devoted to broom corn. Hence, anything like a monopoly in manufacturing is not apt to endure beyond a few years at the best. A fall of farm prices is probable, and with the increased yield there is apt to be a restoration of local manufacturing, not only in many establishments now idle, but in new places, to meet the local demand for broom corn.

The price per dozen for brooms in 1898 ranged from $1.25 to $3.50; for 1899 it ranged from $2.40 to $5. This has the appearance of a monopoly price, which no doubt it is for the time being.

The attempt of a monopoly to prevent competition by raising the price of raw materials, of which it controls the available supply, has one powerful effect which the monopoly does not usually count upon—that is, the discovery and development of substitute materials. Just as gas monopolies, petroleum monopolies, and coal monopolies have stimulated invention in substituting electricity for lighting, propulsion, and heating purposes, so has the monopolizing of the supply of cotton bagging substituted various covers for cotton baling, the monopolizing of binding twine has brought wire into more general use, and the monopolizing of broom corn has stimulated the use of fibrous leaves as "fillers" on the Pacific coast.

Thus far the major portion of the rise in price for brush has gone to the producer rather than to the railroads or the trade. Yet his gains are rather apparent than real. The larger proportion of producers sold on a rising market at $60 per ton, let us say. The highest price paid them represents the premium paid by the manufacturers for getting the material out of the producers' hands and into their own, so that they might not only prevent others from manufacturing brooms, but charge the highest price they dared short of restricting the consumption of brooms.

2. MARKETING BROOM CORN IN ILLINOIS.[1]

The broom corn raised in the neighborhood of Arcola, Ill., which is the cent of what is probably the most important region of production of this crop in tl United States, is sold for the most part through local dealers to manufacture at remote points. These dealers buy on commission for the manufacturers, ai are usually accompanied on their trips into the country by manufacturers' agen who are experts in judging the quality of the broom corn required by their pri cipals. Fully 90 per cent of the crop is sold, or has been until the last yea directly to the manufacturers through these local dealers, who have been in t habit of charging a commission to the manufacturers of $2.50 for each ton pu chased. In 1898, the average price paid by these dealers to the producers w $64.10 per ton. Conservative estimates place the average cost of production broom corn at about $65 per ton, which leaves to the farmer normal profits. this estimate of cost be correct, it will be seen that prices for 1898 were not f from normal prices. The price of broom corn varies much from year to yea Prices in this section of the country have gone as low as $25 a ton and as high $180 per ton.

During the fall of 1899, the manufacturers decided to stop buying in order force prices down, and withdrew their expert agents from the field. Taki advantage of the absence of these manufacturers' agents, a few local deale situated at the main shipping points in the various States which produce broo corn, entered into a secret combination with the purpose of securing a "corne on the supply for the following year. In 4 weeks they had succeeded in securi control of nearly three-fourths of the total supply in the country. The pric which they paid to the producer varied from $65 to $150 per ton, but averaged, far as our reports show, $83.34 per ton. The "Trust," as the company is fam iarly called, has sold none of its purchases for less than $200 per ton, but it st holds a large part, perhaps three-fourths, of its purchased supply.

Most of the broom corn raised in this section and farther west is shipped to Oh and the Mohawk Valley of New York, where it is manufactured into broon Some portion of the supply is used in the manufacture of brooms in State priso reformatories, and other correctional institutions. Only an insignificant porti of the crop is consumed at home or by local manufacturers.

The average freight charges on broom corn from Arcola to points of destinati were, in 1899, $10.35 per ton. This applies especially to long-distance shipmen

In 1898 the average price paid by consumers (manufacturers) per ton was $76. In 1899, owing to the combination of local dealers above mentioned, the avera price which manufacturers were forced to pay was $105.32 per ton. A part this increase in price has gone to the producers, who have received on an avera $83.34, as compared to $64.10 in 1898. A portion has, however, remained in t hands of the dealers, who seem to have reaped large profits from the successf "corner." The total cost of marketing was $21.98 per ton in 1899, as compar to $12.54 per ton in 1898. The difference, $9.44 per ton, probably represents t increased gain to the dealers engaged in the "corner." The distribution of t consumers' price among the factors of production is given for 1898 and 1899 the following table:

Year of sale.	Kind of product.	Consumer pays, per ton.	Producer receives, per ton.	Combined expense, per ton, of distribution between producer and consumer.	Per cent of consumer's price to distribution.	Per cent consum er's price produce
1898	Broom corn	$76.64	$64.10	$12.54	16.36	83
1899	do	105.32	83.34	21.98	20.87	79

Year of sale.	Kind of product.	Number of reports from producers.	Amount reported.	Number of reports from manufacturers.	Amount ported
			Tons.		*Tons.*
1898	Broom corn	47	552	4	510
1899	do	56	821.5	4	574

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[1] Reported by Mr. L. W. Zartman, special agent, Urbana, Ill.

PART THIRTEENTH.

THE HAY TRADE.

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The hay trade is one that is subject to very keen competition in consuming markets. Of all the parties concerned in distribution the hay merchants have had the hardest lot. This is particularly true of those whose dealings have been in the lower grades. The low price of grain as feed has made hay, in which the waste in feeding is large, a hard thing to sell. It pays consumers better to buy cereal feed or milled feed than to buy hay that horses and cattle will not eat, or of which they will eat only three-fourths or one-half. On the other hand, those dealers who have bought only that which the markets would take from them at an advanced cost have profited. Yet, even in these grades of hay, the high price has begun to affect the demand by competition of grain feed. It is a general principle that the substitution point of grain feed for hay makes the maximum limit of price of hay to consumers. In other words, the price of hay can not go higher than the cost of grain for feeding stock.

1. FARM PRICES AND WHOLESALE PRICES OF HAY COMPARED.

The average farm price per ton for hay for 1899 is given as $7.27. This price, compared with five previous years, shows a rise of 21 per cent over 1898 and about 10 per cent over the two previous years. It is, however, still from 15 to 13 per cent lower than during the years of 1894-95--years in which prices were low for farm products generally.[1]

The general levels of producers' prices and consumers' prices are shown by the following comparison of farm prices and wholesale city prices for corresponding years. In city prices, No. 1 timothy is taken as the standard at New York. The lowest price in the range of wholesale quotations is taken as the market price, except where the one price given is the highest.

Years.	Average farm price Dec. 1.	City wholesale price Dec. 1.	Difference per ton.
1894	$8.54	$15.00	$6.46
1895	8.35	18.00	9.65
1896	6.55	16.00	9.45
1897	6.62	15.00	8.38
1898	6.00	12.00	6.00

The Hay Trade Journal (Canajoharie, N. Y.) informs us that the expenses of getting hay to the New York market from the interior hay districts of New York State average 15⅓ cents per 100 pounds, or $3.06 per ton. There is quite a large amount of hay carried from Hudson River points to the New York market by what are known as river barges. The barge rate is $2 per ton, which includes the cost of selling in New York. Some hay is also carried by the Erie Canal at the cost of $1.75 per ton, but this does not include the cost of selling. To this canal rate, as well as to the railway rate of $3.06, must be added $1 per ton to cover the cost of selling at New York City. The hay carried by water is from quite limited districts, and during but a few months of the year; it is a comparatively minor feature in the whole hay movement to this market from up-State productive sections. The railway movement carries the bulk of the sales. Nevertheless, the river rate especially is of considerable importance in reducing railway rates from river points and all adjacent territory. Hay being something that may be easily kept without depreciation in the farmer's hands, the summer rates by water can be utilized, and the railway charge must meet it if the railroads wish to participate in this movement. As a matter of fact the basis of the business is the railway rate, but the cost of moving by water determines the approximate level at which the railroad has to take a considerable portion of this traffic.

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[1] Yearbook, Department of Argiculture, 1898, pp. 694, 699-706.

On this basis the expenses of marketing may be calculated. Hay sells for 85 cents per 100 pounds to consumers by retail. Say it is bought for $12 per ton, or 60 cents per 100 pounds in the country; the freight is 15¼ cents per hundred, and the selling charge is 10 cents per hundred; that is, 25¼ cents per hundred will cover the total cost of distribution. This added to the country cost or farm price will leave nothing for retailing expenses at 85 cents. At $10 per ton the retailer would have but 10 cents profit per hundred, or from 15 to 20 cents per bale. The fact is that at times retailing hay is like retailing sugar—it is sold on the closest kind of a margin.

As a rule, however, the farm price is lower than this—$10. The farm price of $9 is more likely to correspond with the retail price of 85 cents per hundred, or $17 per ton. At 85 cents per 100 pounds or $17 per ton to the consumer, the cost of transportation to New York is just 18 per cent of the consumer's price, at the rate of 15¼ cents per hundred, or $3.06 per ton. At $2 per ton it is a little less than 12 per cent. Freight and billing at the docks at New York amount to 25 per cent of the value to the consumer, and 75 per cent goes to the producer and the retailer. If the retailer handles hay for 15 per cent on its selling price to consumers, the producer receives 60 per cent of the consumer's cost.

Hay receipts at New York by rail and river compared.

Date.	By rail.	By river.	Date.	By rail.	By river.
1900.	*Tons.*	*Tons.*	1900.	*Tons.*	*Tons.*
May 16	800	735	June 5	1,230	260
17	900	220	6	1,010	855
18	990	180	12	1,520	335
19	930	200	23	1,130	440
22	820	494	27	1,520	280
23	1,300	410	29	1,230	487
25	790	396	30	[1] 870	620
26	1,000	108	July 2	810	355
29	1,310	220	5	1,530	642
31	980	240	9	920	680
June 2	530	675	10	780	554

[1] For the week, 1,036 tons.

2. THE KANSAS CITY HAY TRADE.

The crop in the country tributary to Kansas City for a series of years is reported by the Department of Agriculture at Washington as follows:

	1899.	1898.	1897.	1896.
	Tons.	*Tons.*	*Tons.*	*Tons.*
Kansas	5,155,908	4,655,016	4,063,605	4,931,897
Missouri	3,094,394	3,578,110	2,546,304	3,298,201
Nebraska	3,377,698	3,223,379	3,069,885	3,250,006
Iowa	5,025,974	7,908,159	6,711,309	8,025,894
Colorado	1,630,274	1,760,728	1,765,436	1,675,925
Texas	444,953	471,448	427,203	324,622
Arkansas	205,491	215,980	186,042	187,632
Total	18,934,692	21,812,820	18,769,784	21,694,177
Valuation	$75,738,768	$87,251,280	$75,079,136	$86,776,704

The figures for valuation are based upon a farm value of $4 per ton.

RECEIPTS AT KANSAS CITY.

In 1896 there were received in Kansas City 12,580 cars of hay; in 1897, 9,907 cars. In 1898 there was another decrease, or only 9,442 cars, while in the year 1899 the official reports show the receipts into Kansas City to be 12,710 cars, and the shipments are estimated at about 5,000 cars, making a total of between 17,000 and 18,000 cars handled through the city in 1 year.

The large falling off of the receipts in 1897-98 was caused by a lowering of freight rates east of the Mississippi River which permitted Cincinnati and other important hay centers to ship to the southeastern territory and to fill markets which formerly belonged to Kansas City at lower prices than it could be furnished from there; but the change in rates, or the restoration of the old rate, together with a better demand, again brought this market to the front with more hay than the record-breaking year of 1896. On 8 different days during September and the fore part of October the receipts were over 100 cars; September 21, with 141 cars, being the largest.

Kansas City has systematic arrangements for weighing, inspecting, and the handling of hay. The demand for home consumption is increasing, so that there has been at least 20 per cent more hay fed here this year than last; and with the fact that Kansas City has more railroads than any city in the world except one, coupled with the reputation of the city, there is no apparent reason why, with favorable freight rates, this market should not become one of the leading hay centers of the world.

An authority in the hay trade at this market explains why prices of hay are frequently lower for some producers, consumers, and shippers than for others. He says:

"Having received many letters from shippers asking how hay should be prepared for the market to sell to the best advantage, we will make a few suggestions in this article which may be of interest to the grower and shipper. The one great source of loss to the shipper is caused by allowing the grass to stand too long before cutting. If you are expecting to place your hay on the market, you must not give way to your ideas about the feeding qualities, but try and get it as near the condition the trade demands as possible. Cut it early, and, if possible, do not even allow a dew to fall on it after it is partially cured, as this tends to destroy the bright green color and the good appearance which makes it bring the most money on the market. If after cutting your hay it is not dry by night, rake it up and let it finish curing in the windrow.

PROPER BALING.

"Another of the great sources of loss is the making of bales too light to get the minimum weight in the cars, thereby obliging the shipper to pay freight on hay that they do not have in the cars. We believe many of the cheap balers sold are largely responsible for these light weights, as they will not stand the wear and tear of making solid or heavy bales, and many can not make them at all. The majority of the retail dealers will handle nothing but light bales, and we have many inquiries from the Southern States for timothy hay of 30 to 35 bales to the ton, and then the question arises, How can we get light bales and still get the weight necessary in the cars? This can be easily done if balers and shippers look closely to their own interests, and we think to do this they should use 7-foot ties and press the bales tight enough to get 70 to 75 pounds to the bale. You can load about 300 bales of this kind to the 34-foot box car, and by doing this you will have a car that will meet competition with any class of trade.

"Nearly all hay that is reshipped requires 20,000 pounds to the car, and the first question a wholesale shipper asks is as to the weight in the car, and if told 18,000 or 19,000 pounds he does not want it, and the sale is lost because the car is not heavy enough. The local dealer does not care about the weight of the car, but if the bales weigh 80 to 90 pounds they do not want it; but if they are about 70 pounds they will buy at once. Thus it can be seen that if the shipper makes 70-pound bales with 7-foot ties, and loads 300 bales to the car, the commission man can meet the demands of both the shipping and retail trade, and the sales can be made to much better advantage.

"'Competition is the life of trade,' and if the shipper wants to get the most money out of his hay he must study the wants of the buyers, and get the hay up in the proper shape to sell to the best advantage.

"We believe we are safe to say that not one car in ten shipped to this market is heavy enough to reship Southeast, where the minimum freight of 20,000 pounds is charged on the 34-foot car. If the cars are short of this weight, the shipper must stand the loss, as the buyer can not afford to pay this excess freight, or if he does pay it he expects to get the hay enough cheaper to make it up. We advise using 3 wires to each bale, but at the present high prices of wire 2 No. 14 wires should hold a 70 to 75 pound bale."

September prices are made the basis of calculation, as by that time the crop has pretty well started to market, and a big per cent of the shipments are from the farm rather than speculators. We have taken prairie rather than timothy as standard, as 75 per cent of the receipts here are made up of that class.

Prices and expenses of marketing prairie hay at Kansas City.[1]

Year and month of sale.	Consumer paid per ton (average price).	Producer received per ton.	Combined expenses of distribution between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.	Remarks.
Sept., 1899	$5.75	$3.19	Commission, 2½ cents per 100 pounds; inspection and weighing, ⅓ cent per 100 pounds; freight from Yates Center, Kans., 10 cents per 100 pounds. Total, 12.83 cents per 100 pounds.	44.53	55.47	Competing point, 124 miles from Kansas City.
	5.75	3.74	Commission, 2½ cents per 100 pounds; weighing and inspecting, ⅓ cent per 100 pounds; freight from Hammond, Kans., 7¼ cents per 100 pounds. Total, 10.08 cents per 100 pounds.	35	65	Noncompeting point, 92 miles from Kansas City.
	5.75	2.19	Commission, 2½ cents per 100 pounds; inspection and weighing, ⅓ cent per 100 pounds; freight from Venita, Ind. T., 15 cents per 100 pounds. Total, 17.83 cents per 100 pounds.	62	38	Competing point, 189 miles from Kansas City.
	5.75	3.79	Commission, 2½ cents per 100 pounds; inspection and weighing, ⅓ cent per 100 pounds; freight from Falls City, Nebr., 7 cents per 100 pounds. Total, 9.83 cents per 100 pounds.	34.09	65.91	Competing point, 101 miles from Kansas City.
	5.75	2.99	Commission, 2½ cents per 100 pounds; inspection and weighing, ⅓ cent per 100 pounds; freight from Welch, Ind. T., 11 cents per 100 pounds. Total, 13.83 cents per 100 pounds.	48	52	Noncompeting point, 172 miles from Kansas City.
	5.75	3.59	Commission, 2½ cents per 100 pounds; inspection and weighing, ⅓ cent per 100 pounds; freight from Stella, Nebr., 8 cents per 100 pounds. Total, 10.83 cents per 100 pounds.	37.57	62.43	Noncompeting point, 118 miles from Kansas City.

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[1] Figures furnished by Mr. Cuthbert Powell, special agent, Kansas City, Mo.

3. THE HAY TRADE OF ST. LOUIS.

The prices shown below are the ruling prices on a normal market and were the prices realized in December, 1899.

The volume of trade at St. Louis is readily measured by the following figures of receipts and shipments:

Receipts and shipments of hay at St. Louis for a series of years.

Year.	Receipts.	Shipments.	Year.	Receipts	Shipments.
	Tons.	*Tons.*		*Tons.*	*Tons.*
1899	175,820	61,333	1890	114,092	40,247
1898	160,350	46,488	1889	116,346	55,522
1897	178,516	61,067	1888	107,884	34,665
1896	230,352	107,980	1887	85,391	23,861
1895	195,582	69,946	1886	85,078	30,096
1894	159,969	41,238	1885	97,975	38,826
1893	111,238	30,095	1884	78,798	25,273
1892	131,118	32,078	1883	82,540	22,438
1891	111,398	38,253			

Stock in store December 31:

	Tons.
1895, about	7,500
1896, about	8,250
1897, about	3,500
1898, about	2,500
1899, about	3,500

Receipts and shipments of hay during 1898 and 1899 by railroads.

[From Trade and Commerce of St. Louis.]

By—	Receipts, 1898.		Shipments, 1898.	Receipts, 1899.		Shipments, 1899.
	Local.	Through.		Local.	Through.	
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Chicago and Alton R. R., Missouri division	50	....	....	1,065	....	12
Missouri Pacific R. R	6,840	10,480	205	7,280	16,010	120
St. Louis and San Francisco R. R	7,635	2,930	551	13,915	1,240	1,298
Wabash R. R. (West)	5,940	500	210	1,205	790	157
St. Louis, Kansas City and Colorado R. R	....	....	311	20	....	150
Missouri, Kansas and Texas R. R	13,285	1,915	....	16,800	610	45
St. Louis Southwestern R. R	165	....	239	10	....	115
St. Louis, Iron Mountain and Southern R. R	30	....	10,161	10	....	17,749
Illinois Central R. R	7,470	10	9,290	1,950	10	9,432
Louisville, Henderson and St. Louis R. R	20	....	315	....	....	558
Louisville and Nashville R. R	320	....	12,584	340	20	12,623
Mobile and Ohio R. R	50	....	7,351	....	....	11,859
Louisville, Evansville and St. Louis R. R	110	30	1,159	850	80	1,154
Baltimore and Ohio Southwestern R. R	6,470	65	26	1,730	60	70
Chicago and Alton R. R	1,450	20	1,463	2,140	100	2,894
Cleveland, Cincinnati, Chicago and St. Louis R. R	12,246	4,010	30	11,740	3,920	165
Vandalia and Terre Haute R. R	12,300	2,715	124	11,100	1,630	624
Wabash R. R. (East)	12,316	1,879	542	16,150	2,635	1,356
Toledo, St. Louis and Kansas City R. R	18,750	1,450	....	16,560	5,635	197
Chicago, Peoria and St. Louis R. R	7,740	90	375	8,470	890	1,070
Chicago, Burlington and Quincy R. R	5,460	1,760	39	9,130	3,210	280
St. Louis, Keokuk and Northwestern R. R	8,356	350	....	8,930	30	....
St. Louis, Chicago and St. Paul R. R	395	20	20	1,755	50	10
St. Louis, Peoria and Northern R. R	1,460	....	149	2,585	30	114
Upper Mississippi River	793	....	1,541	781	....	1,783
Lower Mississippi River	10	....		41	....	
Illinois River	15	....		13	....	
Total	127,236	33,114	46,488	138,870	36,950	61,333

Monthly range of prices of hay during 1899.

Months.	No. 1 timothy, per ton.	No. 1 prairie, per ton.
January	$8.00-$9.90	$7.00-$7.50
February	8.00- 8.75	6.75- 7.50
March	8.00-10.00	6.75- 7.50
April	9.00-11.00	7.00- 8.25
May	10.50-11.50	8.00- 8.50
June	10.50-11.50	8.00- 8.50
July	10.00-12.00	7.00- 8.50
August	8.00-12.00	6.50- 8.00
September	8.00-10.50	6.50- 7.50
October	9.50-10.50	7.00- 8.00
November	10.00-10.75	7.50- 8.25
December	10.00-11.50	8.00- 8.25

Itemized expenses of marketing hay at St. Louis.[1]

Year and month of sale.	Kind and grade of product.	Consumer paid, per ton.	Producer received, per ton.	Combined expenses of distribution, per ton, between producer and consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.	From St. Louis.
					Per ct.	*Per ct.*	
Dec., 1899	No. 1 timothy	$10.00	$8.12	50 cents commission; $1.38 freight from Jacksonville, Ill. Total, $1.88.	19	81	Competitive point, 91 miles.
	No. 1 prairie	8.00	4.50	50 cents commission; $3 freight from Welch, Ind. T. Total, $3.50.	44	56	Noncompetitive point, 419 miles.
	No. 1 timothy No. 1 prairie	14.50 12.50	....	50 cents profit to dealer; $4 freight to Jackson, Tenn. Total, $4.50.	....	....	258 miles.
	No. 1 timothy No. 1 prairie	15.30 13.30	....	50 cents profit to dealer; $4.80 freight to Tupelo, Miss. Total, $5.30.	....	....	365 miles.
	No. 1 timothy	10.00	8.24	50 cents commission; $1.26 freight from Ramsey, Ill Total, $1.76.	18	82	Competitive point, 73 miles.
	do	10.00	8.30	50 cents commission; $1.20 freight from Fillmore, Ill. Total, $1.70.	17	83	Noncompetitive point, 63 miles.
	do	10.00	8.33	50 cents commission; $1.17 freight from Carlinville, Ill. Total, $1.67.	17	83	Competitive point, 60 miles.
	do	10.00	8.27	50 cents commission; $1.23 freight from Girard, Ill. Total, $1.73.	17	83	Noncompetitive point, 73 miles.
	do	10.00	7.00	50 cents commission; $2.50 freight from Carrollton, Mo. Total, $3.	30	70	Competitive point, 211 miles.
	No. 1 prairie	8.00	4.50	50 cents commission; $3 freight from Vinita, Ind. T. Total, $3.50.	44	56	Competitive point, 436 miles.
	No. 1 timothy	10.00	7.70	50 cents commission; $1.80 freight from Jefferson City, Mo. Total, $2.30.	23	77	Competitive point, 125 miles.
	do	10.00	7.00	50 cents commission; $2.50 freight from Linneus, Mo. Total, $3.	30	70	Noncompetitive point, 238 miles.

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[1] Reported by Mr. E. S. Tompkins, special agent, St. Louis, Mo.

4. COST OF MARKETING HAY IN THE SOUTH.

Take $16 as the standard price of Western hay to the consumer in central Georgia. The price ranges from $15 to $20, but baled hay rarely if ever sells below $16 per ton.[1] The wholesale price at Chicago (No. 1 timothy) sells from $10.50 to $11.50 at the corresponding month.[2] Let us say $11. Then the distribution of timothy hay between Chicago and Macon, Ga., reaches 31 per cent of the consumer's cost. The Chicago price is oftener nearer $10 than $11. In that case the proportion of the consumer's cost that goes to the distribution between Chicago and Macon, Ga., is 50 per cent.

Expenses of marketing hay in several cities.

Date	Kind.	Consumer paid per ton.	Producer received per ton.	Expenses of distribution.	Distributer's proportion of cost.	Producer's proportion of cost.	Markets.
					Per cent.	*Per cent.*	
Sept. 1, 1899..	Alfalfa hay.........	$5.00	$4.00	$1.00	20	80	Denver, Colo
Jan. 1, 1900..	.....do..............	5.00	4.00	1.00	20	80	Do.
May 1, 1900..	.....do..............	10.00	7.50	2.50	25	75	Do.
Sept., 1899..	Timothy hay.......	*a* .85	11.00	3.00	17.6	82.4	Washington, D.C
Mar., 1900..	.....do..............	*a* .95	17.00	2.00	10.5	89.5	Do.
1891-1900.....	Hay	18.00	9.00	9.00	50	50	Atlanta, Ga.

a Per cwt.

5. RATES ON HAY TO SAN FRANCISCO.

Hay is handled in bales, which average about 250 pounds each; is baled in the fields and hauled to the shipping points to be sent to San Francisco, which is the principal coast market.

In the table following are given rates of such transportation. These rates would average rather too high for the bulk of the crop, as will be noticed by looking at the tonnage movement from the points Hollister and Pleasonton. These two points would be a fair average for the State.

Hay is sometimes bought at the shipping point, or even in the field, by country buyers, but a great deal of it is consigned to San Francisco, where it is sold, the usual charge for such services being 50 cents per bale, or 20 cents per 100 pounds.

Hay rates.(a)

Routes of shipment.	Receipts, 1899.	Rates in carload lots per 100 pounds.
	Tons.	*Cents.*
Los Banos to San Francisco..........	118	12½
Bakersfield to San Francisco..........	10	15
Marysville to San Francisco..........	90	10
Hollister to San Francisco..........	7,674	8¾
Pleasonton to San Francisco..........	1,697	6¼

a Figures furnished by Mr. F. C. Friedlander, special agent, San Francisco, Cal.

It thus appears that a combined charge of freight and commission per 100 pounds of hay bought by consumer in San Francisco by the carload lot is 28¾ cents per 100. At a cost of 75 cents per 100 the distributive expenses would equal 38 per cent without allowing for retailers' expenses. Large consumers purchasing directly from producers have no such expense. The small consumers' cost would be higher, say 85 cents per 100. The distributers would get 45 per cent and the producer 55 per cent of the cost to consumers.

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[1] Industrial Commission, Agriculture, pp. 391, 397.

[2] Crop Reporter, April, 1900, p. 2.

6. EXPENSE OF MARKETING HAY IN PORTLAND, OREG.

The demand for hay for the Portland market, except at very rare intervals, is supplied from big tracts of bottom lands along the Willamette and Columbia rivers in Oregon, and also along the Cowlitz, Lewis, and Lake rivers in Washington. The freight rate by boats from these points is so low that hay is very seldom shipped from the interior by rail, the output of these bottom lands usually being sufficient to meet all demands. The distance from which most of the shipments are made is about 25 miles, although it is brought by boat 40 or 50 miles at the same rate as for the shorter distance, $2 per ton being the usual figure. The commission houses charge 5 per cent for selling it, and also make a charge of 40 cents per ton for cartage from the dock to store. The methods for handling hay are rather crude, the most of it being shipped in loose bales, and up to date none of the modern presses such as are used in baling by the Government for shipment are in use in this State.[1]

Year and month of sale.	Kind and grade of product.	Consumer paid per ton.	Producer received per ton.	Combined expenses of distribution per ton to consumer.	Percentage of consumer's price to distributers.	Percentage of consumer's price to producers.
					Per cent.	*Per cent.*
July, 1899	Timothy hay, No. 1	$9.00	$6.15	$2.85	31.66	68.34
January, 1900	do	11.00	8.05	2.95	26.81	73.19

7. FARM PRICES OF HAY IN VIRGINIA.

Virginia's best markets for hay are Richmond, Washington, and Norfolk in the east, and Lynchburg and Danville in the west. A large proportion of hay consumed in the State comes from the Western States, owing to the fact that Virginia does not produce enough for her own use. Shipments from the Western States arrive all the year round at Richmond, in such quantities for local use as to control the price at which local hay is sold. Western hay determines what the Virginia producer gets at this market.

The report of the Virginia labor commissioner of 1898-99 gives average prices of leading farm products compared with cost of production for the different counties. Although these averages are rather general, they are nevertheless figures which we may legitimately use to show the wide margin between farm cost and market price. These market prices are, as a rule, for local markets, where the producer sells to the consumer directly. The given cost of production may not, in each case, include such items as interest on capital, depreciation, and the like; but the cost as given represents the judgment of persons familiar with conditions under which such a commodity as hay is produced. If that judgment is fairly accurate, then the following table of prices and cost of hay indicates that this branch of industry has not yet reached the limit of profitableness.

Average local market price of Virginia hay by counties.

County.	Average selling price.	Average cost of production.	Average profit.	Per cent profit.	Town markets.	Population.
Alleghany	$10.00	$5.00	$5.00	50	4	5,400
Amelia	11.00	6.00	5.00	45.5	1	300
Augusta	6.00	4.00	2.00	33.3	7	12,125
Bedford	10.00	5.00	5.00	50	3	3,425
Bland	5.00	2.50	2.50	50	1	300
Botetourt	10.00				4	2,500
Campbell	10.00	4.00	6.00	60	5	2,115
Caroline	7.50	5.00	2.50	33.3	3	950
Carroll	4.00	1.00	3.00	75	1	300
Charlotte	16.00	6.00	10.00	62.5	2	800
Clarke	7.00	2.50	4.50	64.3	4	2,725
Culpeper	8.00	4.00	4.00	50	2	1,825
Cumberland	10.00	5.00	5.00	50	1	200
Dickenson	10.00	5.00	5.00	50	1	227
Dinwiddie	15.00	6.00	9.00	60	1	35

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[1] Reported by Mr. E. W. Wright, special agent, Portland, Oreg.

Average local market price of Virginia hay by counties—Continued.

County.	Average selling price.	Average cost of production.	Average profit.	Per cent profit.	Town markets.	Population.
Essex	6.00	4.00	2.00	33.3	3	917
Fairfax	5.00	4.00	1.00	20	1	2,075
Floyd	10.00	3.00	6.00	60	2	525
Fluvanna	10.00	5.00	5.00	50	2	150
Franklin	6.00	4.00	2.00	33.3	1	628
Frederick	7.00	3.00	4.00	57.1	1	6,421
Gloucester	15.00	4.00	11.00	73.3	1	150
Goochland	15.00	8.00	7.00	46.7	1	50
Grayson	12.00	5.00	7.00	58.3	1	200
Greene	10.00	1.50	8.50	85	1	300
Greenesville	15.00	6.00	9.00	60	2	1,300
Halifax	10.00	5.00	5.00	50	4	3,925
Hanover	12.00	5.00	7.00	58.2	2	1,000
Henrico	5.00	2.85	2.15	43	(1)	....
Henry	13.00	3.00	10.00	76.9	3	4,150
Highland	10.00	4.00	6.00	60	1	300
James City	10.00	6.00	4.00	40	2	2,800
King and Queen	10.00	2.00	8.00	80	1	40
Lancaster	10.00	4.00	6.00	60	3	750
Lee	9.00	....	....	....	1	600
Loudoun	8.00	4.00	4.00	50	9	1,190
Lunenburg	12.00	5.00	7.00	58.3	1	122
Madison	10.00	4.00	6.00	60	1	350
Mathews	12.00	10.00	2.00	16.2	2	510
Middlesex	10.00	2.00	8.00	80	2	600
Montgomery	9.00	4.00	5.00	55.5	3	2,400
Norfolk	15.00	6.00	9.00	60	2	1,900
Nottoway	13.00	2.00	11.00	84.6	4	2,098
Orange	8.00	5.00	3.00	37.5	2	1,775
Powhatan	10.00	6.00	4.00	40	1	70
Prince Edward	10.00	6.00	4.00	40	2	225
Prince William	8.00	2.00	6.00	75	4	1,375
Richmond	10.00	3.00	7.00	70	1	200
Rockbridge	8.00	2.50	5.50	68.8	6	9,225
Scott	10.00	4.00	6.00	60	1	400
Shenandoah	7.00	....	....	....	6	1,100
Smyth	8.00	2.50	5.50	68.8	3	825
Spottsylvania	10.00	7.50	2.50	25	1	1,528
Stafford	12.00	6.00	6.00	50	1	30
Surry	15.00	8.00	7.00	46.7	2	375
Warren	10.00	5.00	5.00	50	2	2,237
Washington	10.00	2.00	8.00	80	4	11,925
Westmoreland	10.00	8.00	2.00	20	1	200
Wythe	8.00	4.00	4.00	50	1	1,125
York	10.00	6.00	4.00	40	2	500

[1] Richmond.

PART FOURTEENTH.

THE FRUIT AND VEGETABLE TRADE.

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The vegetable supply for American cities comes, as a rule, in the first place, from near-by sources. The larger cities of the North and South, however, receive a large proportion of what they consume from Southern territory before the local supply is ready for market, and from the North after the local supply has been marketed.

The development of rapid transportation facilities between the Southern vegetable fields and the more northern consuming centers all the way across the continent has seriously affected the position of the local producer.

New Jersey furnishes an illustration in point. Lying between the two cities of Philadelphia and New York, it once occupied a high plane of prosperity in supplying vegetables, orchard products, and melons. Likewise Delaware, with both Baltimore and Philadelphia as markets, was until quite recently regarded as the main source of the peach supply for Northern cities. But the progress of peach growing in Georgia and later in Michigan and Colorado has materially altered the relation of the Eastern producer to the market. In the East generally the vegetable grower or truck farmer all the way from Cape Charles to Montauk Point has found the demands of consumption in his best markets to a considerable extent satisfied by Southern shipments before his crop is ready for sale. A market which was formerly wholly his own is now more than half supplied from other sources. So in the States north of the Ohio. The shipments from the more southern territory from the Gulf coast northward operate in a similar manner upon consumption in the city markets of the central West, and thus affect the prices of local production unfavorably. The appearance of these successive supplies in any given year at least has the effect of reducing the volume of demand on local production. Possibly the most noteworthy outcome of these changes, so far as the Eastern farmer is concerned, has been the development of dairy farming and the rise of the canning industry. The dairying industry is centered in New York and the canning industry has developed to such proportions in Delaware, Maryland, and Pennsylvania as to entitle Baltimore to be considered headquarters for stocks of vegetable crops used for canning purposes. The rank of New York in dairying is best indicated by a comparison of its output with that of the country as a whole in the single industry of cheese making. "It is stated on reliable authority that there are about 4,900 cheese factories in the United States, in addition to several hundred creameries making cheese in small quantities. The total output of cheese last year was 265,000,000 pounds. Of this about 76,000,000 pounds were produced in New York." From this it appears that somewhat less than 29 per cent of the country's cheese product is made in New York State.

The rise of the Eastern dairying industry is the result of two sets of factors, the first of which is the presence of a large local market; the second is the financial failure of cereal farming in competition with the Western grower. In the West the transition from cereal to dairy farming was occasioned by a rather different influence. The rise of dairying in the West is the direct outgrowth of wasteful methods of grain raising. Wherever the extensive system of farming has reduced the fertility of the soil to an unprofitable level there are two uses of capital and labor open to restore the land. The farmer may introduce a larger factor of live stock into his farm economy as a restorative agency or he may buy artificial fertilizers to replenish the soil. In the dairying districts of the North and West the former policy has been followed, while in the South, where cotton and tobacco culture have ruled, the latter method has been the rule for keeping the soil in a state of profitable productivity. The competition of Western dairy products with the local product in Eastern markets has to a great extent forced down the profits of this business in the East. New England has, however, maintained prices better than the Middle States have, on account of the fixed local demand for her own local output. But the Middle States, excepting New York, have felt most severely the pressure of low prices in this particular farm product on account of Western competition. Out of this competition two lines of development seem to be more or less clearly defining themselves in Eastern farm policy. While the farm remote from the local market is still making mixed production its main concern, including grain, live stock, orchard products, poultry and eggs, the trucking sections are adapting themselves more generally to the demands of the canning industry and depending less generally on the local market.

1. DISTRIBUTION OF CALIFORNIA FRUIT.

The importance of widely distributing California fruits in the largest number of Eastern markets and avoiding gluts in a few large centers seems to be keenly appreciated by growers and shippers, as evidenced by the larger shipments this year to smaller markets and the opening of new markets in interior places—which in the report are grouped under the heading "minor points"—thus, in the interest of the grower, preventing the gluts so common before the creation of this association. The consignments to foreign markets have also greatly increased—from 42 cars shipped by rail through Atlantic seaboard cities in 1896 to England alone, to 124 cars in 1899 shipped to England, Scotland, Germany, and Mexico.

The shipment of peaches, however, was double that of any year since 1894. The shipment of plums and prunes increased 63 per cent over last year. The shipment of apples decreased nearly 20 per cent, while the shipment of pears during the past 4 years has varied but slightly. The total shipments of 1899 exceeded that of 1898 by 1,862 cars—an increase of 37 per cent.

The California Fruit Growers and Shippers' Association has continued successfully to carry on the work delegated to it by the growers assembled in convention in 1894. Their policy has been to maintain union auction rooms at each Eastern auction point, free and open to all buyers, thus getting all the buyers and all the fruit under one roof at one time, and thereby securing the very highest market price for the fruit. The bureau of information has continued the publication of the daily bulletin, giving in tabulated form the report of the railroad companies, of the daily Eastern fruit shipments, and the destination of the cars. The bulletin has proven of great value to the grower and shipper by giving them approximate information of the daily shipments, the varieties of fruit going forward, and the date of their probable arrival in the Eastern markets. Since the issuance of the daily bulletin, the glutting of Eastern markets has been of rare occurrence, of short duration, and attributable solely to local causes.[1]

The accompanying table, showing the number of cars shipped to each place for the last five years, indicates that the growing markets of California fruits are along the Atlantic seaboard. The shipments to Chicago have declined from 1,473 cars in 1895 to 1,060 in 1899. The shipments to New York, Boston, Philadelphia, and Montreal have increased. The explanation for this lies largely in the fact that Chicago and other Western cities are receiving increasing supplies of fruit from such States as Georgia, Michigan, and Colorado.

The character of these products, however, is so much more perishable than the California article that it is not so profitable to ship them to the more distant Atlantic markets in competition with California fruits.

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[1] Report of the California Fruit Growers and Shippers' Association, 1899.

Destination and number of cars shipped to each place in 1895, 1896, 1897, 1898, and 1899.

Destination.	1895.	1896.	1897.	1898.	1899.
Chicago	1,478	1,007	410	1,203	1,060
New York	862	1,055	1,456	1,429	1,694
Boston	279	471	543	536	710
Philadelphia	82	90	202	176	339
Minneapolis	121	147	180	167	217
Baltimore	37	5	16	16	67
Cincinnati	15	2	20	15	89
Kansas City	91	81	86	116	165
Montreal	11	81	98	96	128
New Orleans	75	85	81	62	126
Denver	148	136	98	229	269
St. Louis	78	68	59	27	115
St. Paul	109	91	121	67	125
Omaha	176	85	165	156	194
Cleveland	29	10	37	25	83
Pittsburg	26	25	40	47	137
Buffalo	15	7	15	5	34
Milwaukee	42	32	52	19	60
England		42	58	42	117
Scotland					4
Germany					2
Mexico				1	1
Minor points—Canada					52
Minor points—United States	863	532	586	572	1,051
Total	4,568	4,052	5,323	5,007	6,869

Number of cars of each variety shipped in 1895, 1896, 1897, 1898, and 1899.

Varieties.	1895.	1896.	1897.	1898.	1899.
Pears	1,187	1,624	1,640	1,595	1,684
Peaches	1,289	976	1,316	1,103	2,625
Grapes	1,010	712	1,100	734	847
Plums and prunes	465	407	742	542	885
Apricots	162	172	177	123	90
Cherries	180	88	239	297	85
Apples	105	53	61	596	490
Quinces	13	8	24	1	19
Figs		2	3		
Nectarines	5	1	10		2
Persimmons			2	1	1
Mixed	152	9	9	15	24
Cars not reported					117
Total	4,568	4,052	5,323	5,007	6,869

In marketing the fruit products of California an agency not usually found elsewhere appears. The packer of orchard products and fruits is there a necessity. Owing to the distance from markets over which the fruit must go, packing becomes a fine art. In some respects, therefore, the packing-house interests control the situation. Efforts at uniting growers and packers under the same organization have not always proved that that is a workable relation. As yet the packer's position is not clearly defined, but his services are none the less indispensable.

California has been fittingly called a fruit-growing and fruit-shipping empire. At the present time that State controls the orange output, pending the rapid recovery of Florida, and subject to the influence of foreign supplies from the West Indies and the Mediterranean. Florida shipped only 216,578 boxes in 1897, but will probably market 1,500,000 boxes next year. The Dingley tariff on oranges was put at 1 cent a pound. This gave a wonderful stimulus to the progress of this industry on the Pacific coast.

Citrus fruit shipments from southern California.

[From the Fruit World.]

Season of—	Cars.
1895–96	7,575
1896–97	7,350
1897–98	15,153
1898–99	10,351
1899–1900	15,000

During the same period citrus shipments from points in central and northern California have grown from an aggregate of 150 cars each season to about 600 cars during the season of 1899-1900.

In the figures given above the shipments of lemons are of course included. During the season 1897-98 a total of 166 straight cars were shipped, but are included in the total above. There were many part cars of lemons shipped, which are necessarily included above. In the season of 1898-99 a total of 903 straight carloads of lemons were shipped, included in figures above given.

Distant fields of production have overcome the disadvantages of a far-off market in two other ways than by rapid refrigerated transportation; namely, by drying and canning fresh fruit at the source of supply. California dried and canned fruits are an enormous output, reaching into almost every part of the commercial world. The figures below give an idea of the volume and growth of this species of commodities.

Dried fruit product of California.[1]

[From San Francisco Produce Exchange.]

	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.
	Pounds.	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*
Apples	1,800,000	2,750,000	3,800,000	5,850,000	1,560,000	2,650,000	5,250,000	3,520,000
Apricots	13,500,000	12,500,000	9,500,000	28,750,000	10,650,000	6,740,000	30,125,000	8,240,000
Peaches	13,200,000	13,500,000	16,800,000	30,540,000	24,500,000	16,160,000	27,150,000	10,960,000
Pears	2,000,000	2,250,000	2,640,000	6,530,000	5,100,000	9,650,000	6,350,000	6,620,000
Plums	2,250,000	2,000,000	1,500,000	2,760,000	1,500,000	2,100,000	3,250,000	2,160,000
Prunes	27,500,000	22,500,000	52,000,000	41,750,000	61,500,000	55,200,000	97,780,000	90,420,000
Grapes	5,500,000	4,000,000	4,900,000	1,500,000	4,250,000	2,690,000	3,450,000	610,000
Nectarines	600,000	700,000	700,000	1,250,000	1,350,000	625,000	285,000	180,000
Figs	360,000	500,000	500,000	1,540,000	2,750,000	2,160,000	3,250,000	1,780,000
Total	66,710,000	60,700,000	93,340,000	126,470,000	122,460,000	97,975,000	176,890,000	127,820,000

[1] Compiled by B. N. Rowley, publisher of the California Fruit Grower.

California canned-fruit product, raisin crops, and shipments of fresh and dried fruits.

[Compiled by Brainard N. Rowley, publisher of the California Fruit Grower.]

RAISIN CROP, ESTIMATED IN 20-POUND BOXES.

Year.	Boxes.	Year.	Boxes.
1873	6,000	1886	703,000
1874	9,000	1887	800,000
1875	11,000	1888	950,000
1876	19,000	1889	1,250,000
1877	32,000	1890	1,900,000
1878	48,000	1891	2,600,000
1879	65,000	1892	2,850,000
1880	75,000	1893	4,250,000
1881	90,000	1894	5,150,000
1882	115,000	1895	4,568,000
1883	140,000	1896	3,412,530
1884	175,000	1897	4,685,200
1885	470,000	1898	4,031,550

PACK OF CANNED FRUITS (ALL KINDS).

Year.	Cases.	Year.	Cases.
1876	270,833	1888	1,360,400
1877	206,250	1889	1,420,600
1878	235,324	1890	1,495,300
1879	298,356	1891	1,571,200
1880	236,458	1892	1,602,370
1881	472,916	1893	1,001,640
1882	541,665	1894	1,528,815
1883	593,750	1895	1,639,807
1884	576,900	1896	1,602,446
1885	565,750	1897	1,942,982
1886	675,000	1898	2,085,166
1887	772,500		

INTERSTATE SHIPMENTS OF FRESH DECIDUOUS FRUITS.

Year.	Pounds.	Year.	Pounds.
1885	22,838,540	1892	111,689,000
1886	26,185,000	1893	159,900,000
1887	35,573,330	1894	179,576,500
1888	38,231,900	1895	132,587,000
1889	44,568,480	1896	115,300,000
1890	74,646,000	1897	145,250,000
1891	98,680,000	1898	139,550,000

INTERSTATE SHIPMENTS OF CURED FRUITS.

Year.	Pounds.	Year.	Pounds.
1892	58,750,500	1896	97,150,000
1893	83,000,000	1897	150,325,000
1894	103,500,400	1898	153,400,000
1895	122,750,000		

Citrus and deciduous fruits from California follow a very different course in distribution. Oranges and lemons go direct to every town in the country having a population of 10,000 or more. But deciduous fruits, on the other hand, are shipped to a few large centers and there distributed in smaller quantities throughout the territory that is commercially tributary thereto.

Citrus fruits come earlier in the season and are followed by deciduous fruits. Their two seasons overlap for a time, and the fresh deciduous fruit in the earlier summer competes with the citrus fruit in the latter part of its season.

Orange shipping begins in December and extends through six months or more. The deciduous supply reaches the Eastern market in May, in advance of Eastern or Southern fruits. The volume of the movement from this time on for two years is compared in the following table:

Monthly shipments of carloads of deciduous fruits, 1898, compared with 1897.

[From Southern California Fruit Exchange.]

	May.		June.		July.		August.		September.		October.		November up to 15th day.		Total up to 15th day.	
	1897	1898	1897	1898	1897	1898	1897	1898	1897	1898	1897	1898	1897	1898	1897	1898
Chicago	51	56	157	227	277	280	437	241	288	189	142	109	41	51	1,396	1,153
New York	30	26	169	206	321	301	415	287	309	270	166	192	33	71	1,443	1,353
Boston	7	5	64	93	160	164	173	169	98	67	33	33	8	4	543	535
Philadelphia	6	4	28	12	66	61	41	33	31	16	23	18	4	2	202	176
Minneapolis	1	1	14	33	45	19	60	45	44	31	13	5	....	....	180	167
Baltimore	....	....	4	7	10	8	......	1	2	....	....	....	....	....	16	16
Cincinnati	....	....	5	....	8	......	5	......	......	4	2	3	....	3	20	13
Kansas City	....	....	7	8	11	17	19	15	31	36	13	26	2	7	86	109
Montreal	....	....	10	10	32	13	52	28	4	11	....	4	....	....	98	96
New Orleans	1	2	6	7	15	3	28	11	24	25	7	10	....	3	81	61
Denver	4	2	9	16	32	44	20	46	15	42	12	43	5	19	97	212
St. Louis	....	....	4	1	6	2	9	3	24	2	11	13	2	5	59	26
St. Paul	2	5	14	11	26	18	32	16	36	10	10	4	1	....	121	67
Omaha	1	....	29	18	53	28	43	40	32	46	7	21	....	3	165	156
Cleveland	....	....	5	3	11	18	17	4	4	....	....	....	....	....	37	25
Pittsburg	....	....	2	9	19	25	11	8	8	5	....	....	....	....	10	47
Buffalo	....	....	3	....	2	4	10	1	......	....	....	....	....	....	15	5
Milwaukee	....	....	1	2	15	10	19	7	13	....	4	....	....	....	52	19
City of Mexico	....	....	....	....	......	......	......	......	......	....	....	....	....	1	......	1
England	....	....	5	....	19	4	17	13	16	4	1	7	....	3	58	31
Minor points	....	....	39	48	156	125	191	143	128	137	55	85	16	18	585	556
Total	106	104	575	711	1,287	1,204	1,599	1,111	1,110	895	502	576	115	190	5,294	4,824

Excess of shipments of 1897 over 1898 to November 15, 470 cars.

Range of growers' prices of oranges.—The range of farm prices for California oranges for the past 4 years has varied little for such grades as extra fancy Redland navels, which have been maintained at from $1.90 to $2.50 per box. For the average grades by years, the following has been given by a leading firm of growers and packers:

	Per box.
1896-97	$2.25 to $3.00
1897-98	1.75 to 2.50
1898-99	2.00 to 2.50
1899-1900	2.00 to 2.50

Prices of somewhat more exact record are given by the Southern California Fruit Exchange of Los Angeles:

Prices and shipments of California oranges.

[From Southern California Fruit Exchange.]

Season.	Average delivered prices, all grades.		Exchange shipments varieties.			Total.	Sundry shippers.	Total shipments.
	W. navel.	Seedlings.	Navel.	Seeds.	Various.			
			Cars.	*Cars.*	*Cars.*	*Cars.*	*Cars.*	*Cars.*
1890-91								1,000
1891-92								5,000
1892-93								6,635
1893-94								5,000
1894-95			1,465	1,299	1,150	3,914	3,786	7,700
1895-96	$2.44	$1.87	1,395	507	580	2,482	4,034	6,516
1896-97	2.76	1.86	856	518	415	1,789	5,659	7,448
1897-98	2.37	1.71	1,984	716	1,325	4,025	11,162	15,187
1898-99	2.65	2.22	1,881	330	789	3,000	7,311	10,311

Transportation charges on oranges.—The transportation rate on oranges has been quite constant for some years. For all points east of the Missouri River or Colorado it has been $1.25 per hundredweight. Orange boxes are estimated at 72 pounds each, making the freight charges 90 cents per box.

The freight charge to Colorado points and Montana districts is $1.12½ per hundredweight. The rate to Liverpool and London would be about $2.25 per 100 pounds, or about $1.60 per box.

The railroads have increased their earnings per car, and thus per train load, by raising the minimum carload from 24,000 to 26,000 pounds. This has required the shipper to put 22 more boxes of oranges in each car—362 instead of 336 boxes. At the same rate per box, each carload yields $325.80 freight from Los Angeles to Eastern destination. Under the former minimum carload weight each car brought an income of $302.40. The gain from this change was therefore $22.40 per car, or an increased income of $224 on a train of 10 cars.

There is no evidence that this has in any wise prejudiced the interests of the shipper. The tendency is to increase the carload weight in every quarter and in every kind of traffic, thereby reducing the cost of transportation per unit of product carried. The carrier has, at least, profited by the rise in minimum weight. The railroads may not have, to any known extent, shared the gain with the shipper by lowering the charges.

The following statement shows the comparative cost per box of transporting oranges from Florida, California, and Mediterranean ports, respectively, to New York City:[1]

	Florida.	California.	Mediterranean.
Boxing and cartage	$0.35	$0.35	$0.40
Average local rate to Jacksonville	.25		
Rate to New York	[2].35	.90	[2].53
Commission and expenses	.10	.10	.10
Duty			.70
Refrigeration, April to November		.25	
Total	1.05	1.60	1.52

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[1] Crop Reporter, July, 1900.

[2] Ocean rate.

Proportion of value to producers and distributers.—The data available to get at the difference between producer's price and consumer's cost are the following: If we take the price paid the producer to be $2 per box on the average, the freight to Eastern points being 90 cents per box, the cost on cars would be $2.90. If the retailer at the corner fruit stand pays $3.50 per box it is an advance of 60 cents per box for handling, storage, and other charges at point of consumption. It is impossible to figure accurately the retailer's advance, even at a rate per dozen to consumers, because the size of the oranges varies, and with that the number of dozens in a box. But at an advance of even 50 cents per box, the value of the oranges would be doubled on the way from producer to consumer. This is probably a fair estimate of cost to consumers. The producer gets one-half and the distributers get the other half.

The success of Californian producers in marketing fruit is due to their cooperative methods, evolved out of years of bitter failure in competitive marketing. Cooperative marketing has here been developed beyond that of any other section of the United States.

During the season of 1896-97, on sales of $1,600,000 worth of citrus fruits, the loss on account of bad accounts was only $220 to one association of producers. On sales of 2,000 cars in the subsequent season not any loss from bad accounts had occurred. The cost of marketing in the previous year on gross sales of over $3,000,000 was approximately 3¼ per cent, covering all expenses of distribution, from receipt of fruit in cars till it passed out of the market and the receipts were distributed to the shippers.

Cooperative marketing in California took its rise in the rapid fall of farm prices for fruits, citrous and deciduous alike. The Southern California Fruit Exchange is possibly the best organization of its kind in the country. Along with four or five other similar associations, it markets a very large proportion of the orange crop of California. Out of sales amounting to $2,750,000 in 1898, not a dollar was lost on bad accounts. In three seasons a business of $7,000,000 was done, with a loss of only $866 in bad accounts. The crop handled by this exchange was marketed at a cost of 3 per cent of the sales, whereas it formerly cost 10 per cent of the sales value of the product to market it.

Deciduous fruits have not been handled with so great a degree of success. At present the majority of these fruit growers try to sell their crop as early as possible for cash, fruit delivered f. o. b. to some consignee in the East. This competition among individual growers has made the market price of cured fruit so fluctuating and uncertain that many dealers in California and in the East have lost heavily. In Santa Clara County about 80 per cent of the fruit dealers outside of the association became bankrupt. The cost of producing cured fruit has steadily increased, while the price of cured fruit has steadily declined. Cooperation is resorted to in order to lessen the cost of marketing and to limit the evil effects of home competition.

2. DIFFICULTIES OF COOPERATIVE MARKETING.

The California fruit trade illustrates not only the successes but the limitations of cooperative marketing on the part of producers. The experience may conveniently be summarized from the standpoint of its difficulties as follows:

(1) The greatest difficulty in commercial cooperation of farmers is their unwillingness to pay the market price for competent management. This may at times seem unduly high. The president of the California Raisin Growers' Association received a salary of $12,000 a year (1899-1900). In competitive enterprise there is also greater tenure of office and a more hearty appreciation for hard work. Cooperation from the beginning is uphill work; farmers will not, as a rule, pay for the expense of organizing, which is the hardest work of all. A cooperative exchange must compete with farsighted business ability. If poorly organized and weakly managed, it will be found incapable of sustaining the confidence of its members or of commanding the credit of the trade to which it must sell its goods. A competent grade of business ability is the first requisite of success in cooperation among producers. The history of the cooperative organizations of California amply bears out this principle.

(2) A second difficulty is the lack of free cash capital with which to meet expenses and also to make advances, if necessary, to growers who are obliged to borrow on the credit of the growing crop. Cooperative movements are often obliged to compete with agents supplied with ready cash to relieve just this sort of financial necessity on the part of the grower. The grower yields because he has no other recourse for his cash needs.

(3) A third difficulty lies in the attempt to cover too much territory, or to include a too widely diffused membership for the cooperative capacity of the members. A local organization deals with similar conditions and similar grades of products. It escapes many difficulties which arise in the attempt to make a comprehensive piece of cooperative machinery responsible for the work of a great variety of localities. This is especially the case when the sales are made and orders apportioned by a central authority. However general the organization, as with the Delaware labeling system, its strength lies in not doing everything, but in guaranteeing that some one definite thing will be done. In this case nothing but uniformity of size of fruits and vegetables in the same package is guaranteed by the State organization, but the responsibility for packing and selling is put upon each shipper, and the organization enforces discipline upon delinquents.

(4) A fourth difficulty in cooperative marketing is that of the adjustment of the cooperative machinery to the regular trade. Cooperative marketing is not simply limitation of competition among producers; it is equally cooperative with the agencies which stand nearest to consumers. Cooperative dairies, sometimes, by the aid of express companies, deliver butter to their individual customers in cities; but as a rule, the retailer can not be dispensed with in the sale of perishables for which there is a more variable and uncertain demand. Fruits and vegetables are especially subject to this limitation. Some one must be found to assume the risks of distribution after the products have entered the market. No organization of the retail trade, for instance, could handle the 30 carloads of strawberries that arrive in Chicago daily during the height of the season. There must usually intervene brokers or commission men of some sort, capable of handling receipts in bulk and breaking them up among the representatives of the wholesale and retail trade.

This difficulty in cooperative marketing of farm products arises largely from a radical misconception of the real business of the cooperative movement. A new cooperative enterprise has first to learn that the chief business of cooperative producers is to compete—to compete successfully with the mercantile agencies on which the cooperative organization is meant to be an improvement. The Five States Milk Association of producers for example, in the New York market, has to count on the competition of the New York Milk Exchange, composed almost wholly of dealers, at the consuming end of the line, and on the competition of the unaffiliated producers in the field. In the California fruit associations the contracting for from 70 to 90 per cent of the acreage has generally been the basis of successful cooperative marketing. Even then the unsigned producers may do a great deal to lower the level of prices received for the crop.[1] Cooperation of grain farmers in shipping grain directly to terminal markets for sale on commission, in Iowa, thereby ignoring the local grain dealer, has led to the boycott of both the farmers and the terminal commission houses handling their grain by the Grain Dealers' Union, which in certain localities, represents as many as 800 elevators. These instances serve to illustrate one of the most serious difficulties in commercial cooperation of rural producers.

"There can be no economic gain unless there is forthcoming a volume of business sufficient to warrant the fixed expenses necessary to transact it. A small neighborhood association can seldom profitably attempt to sell in distant markets, because the cost of securing and maintaining the necessary connections, when spread over a small volume of business, will make the cost to individuals too great. Such associations can secure the gain of concentration, but must sell to local buyers or through some other agency. The tendency of modern business is into concentration in trusts. This tendency is reaching the farmers and must ultimately prevail with them as with others.

"It should be apparent from the foregoing that there can be no economic gain to cooperative associations of producers in dispensing with the services of wholesale and retail merchants, or in any attempt to directly control prices at which they shall sell the goods for which they have paid their money, but that, on the contrary, loss is almost sure to follow such attempts. It seems also clear that cooperation does offer opportunity for gain within reach of such reasonable ability and persistence as ought to be available in concentrating and grading the product for the market.

"It remains to examine the manner in which the concentrated and graded product in the hands of associated producers can be best sold and delivered to the wholesale merchant; and in this I shall assume that the product is to go direct from the warehouses of the producers to those of the wholesale merchants.

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[1] New York Commercial, May 2-9, 1900.

Those warehouses may be situated near the point of production, or, if the market is distant and competition compels, they may be in the principal marketing centers. I have already stated that I do not believe cooperative organization equal to the strain of maintaining and profitably supervising distant warehouses from which goods can be sold in small lots and under conditions which retailers would require, but it is possible, although to be avoided unless compelled by competition, to simply arrange for sales for cash only in such considerable but less than carload lots as wholesale merchants can use.

"The product must be brought to the attention of the wholesale merchant by solicitation. Farmers sometimes appear to suppose that merchants go out and canvass the market for their supplies. They do not. They sit in their offices and buy from samples, which are brought to them. Of course, if for any product there is a large demand and small supply, merchants will hunt for it; but I know of no such agricultural product, and if there be one, its producers are not interested in cooperation, which, as has already been said, is seldom undertaken by those who readily find profitable sale for their products without it.

"An association of producers, therefore, having collected its product, and prepared it for market, has only one thing to do, which is to obtain a list of wholesale customers—of whom there are but a few hundred in the country in any line—advertise their goods, either by circulars or newspapers, and then cause each customer to be regularly and persistently solicited for orders. There is absolutely nothing more to the selling of goods than this. It is, however, a matter of infinite detail, requiring, in any considerable business, the unremitting attention and effort of very capable men, not only to obtain the orders, but to fill them with such promptness and entire honesty as to retain customers when secured."[1]

The marketing of farm products has possibly never received so much attention from producers as during the past 15 years. Cooperative buying of commodities consumed by farmers has had a longer history; but it is doubtful, for economic reasons, whether it has proved its availability as a means of increasing the producer's purchasing power to such an extent as cooperative selling has. Cooperative selling has demonstrated the advisability as well as the practicability of handling the crop as a whole at least for certain localities. Thus handled, it is possible to distribute widely the product to a larger number of smaller markets in order to avoid gluts in a few leading markets. The railroads are, as a rule, more ready to deal with a large association representing a locality than with many individuals, and the commission merchants are better able to cooperate with the producers when their methods of marketing are farsighted enough to avoid breaking down prices in consuming centers by unwise distribution of shipments. These are the features in cooperative selling on the part of producers which have succeeded in eliminating much of the distrust and dissatisfaction with the older methods in which distributers and consumers alike profited by the blind competition of producers.

The failure of cooperative marketing of farm products is ascribed by Prof. John Long, of England, to the fact that farmers are not trained in those essential traders' habits, those attentions to small details of assorting, packing, etc., which consumers demand, and which alone contribute to the success of the retail establishments which supply large numbers of persons of every class of society.

3. OTHER METHODS OF MARKETING FRUITS AND VEGETABLES.

One of the complaints constantly made by the trade against the producer is that of lack of care in assorting fruits according to sizes, or of deliberately putting the larger sizes on top and the smaller sizes below, so that the deeper in the barrel or box one goes the lower the grade gets. Possibly this is not so much the case as formerly, yet it occurs frequently enough to do the entire class of producers of a given locality a great deal of injury if only a few indulge in the practice. The trade itself protests in its way—that is, by being obliged to mark down the entire supply to the price paid for the badly packed assortments.

Against this injustice to producers there is one effectual method of marketing. That is, by producers organizing themselves into associations which guarantee honesty in packing and grading. The orange growers and packers of California have been eminently successful in this respect. Their history is well known. Certain peach growers of Georgia have succeeded in improving the standing of their products in the Northern markets by labeling their crates as coming from well-known growers. One of the latest developments in this movement among producers is that of the Farmers' Produce Association of Delaware.

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[1] Adams, The Modern Farmer, pp. 273-275.

(1) *The trade-mark in the produce trade.*—The principle of the trade-mark is made use of to give the producer the benefit of his own superior methods of preparing his products for market, to protect him from the careless and unprincipled competitor, and to secure to him the benefit of the confidence that these qualities and methods develop in the market and among consumers.

"The trade-mark will appear on all shipments made by members, something as follows:

FARMERS' PRODUCE ASSOCIATION OF
DELAWARE. 27
The contents of this package are
GUARANTEED
to be as good all through as on top.

"The trade-mark used by each member will bear his number so that the commission merchant can properly credit shipments and trace dishonest packing if any occur. The trade-mark simply guarantees contents to be as good as they appear on the surface, but not of any particular grade. In this way the grower who ships a really superior grade will get a price accordingly and will not suffer from the inferior grade of his neighbors. It is hoped that city buyers will soon pay more for packages having these labels, or at least take them in preference to others not guaranteed.

"This arrangement is good for the farmer because he gets reliable market telegrams as soon as he gets his fruit to the station, and he can determine whether to accept a cash offer or ship. If he ships he knows his fruit will go where he will get all there is in it. It is good for the commission man because he will receive large consignments of guaranteed goods which buyers will want. It is good for the buyer because it gives him recourse on the shipper through the commission man for a rebate in case of dishonest packing."[1]

It is eminently true that as soon as producers make a beginning at improving their methods of marketing, they discover many other ways in which progress can be made in the removal of obsolete and the substitution of more economical means of distribution. Of course all these efforts have primarily at heart the good of the producer; but the fact is soon made apparent that the producer's prosperity lies in promoting increased consumption and in encouraging less hazardous methods of distribution. This same association of Delaware producers has consequently consolidated its business at both the shipping point and at the selling point. It has thus increased the volume of trade enough to reduce the rate of commission in leading markets, while also reducing the expenses of handling at home. Its methods are such as to bring to the farm shipping point the competition of buyers for cash. This not only improves the position of the producer as a seller, but also as a capitalist. As a seller he keeps control of his products until he knows the prices that rule in the market. As a capitalist he realizes at once upon the products of his labor, and makes himself master of the situation to a much greater extent than under older methods of markets. It is the policy of this association to obtain more remunerative prices for fruits and other farm products by encouraging cash buying at the railroad stations, by securing more favorable railroad freight and car service, and by limiting consignments of members to one or a few reliable commission merchants in each city to which shipments are to be made. A shipping agent at each railroad station will receive market quotations by telegraph from the commission men and reserve them for the exclusive use of members. The commission merchant charges 10 per cent for selling, but remits 3 per cent to the agent through whom shipment was made. This 3 per cent is to be divided equally between the shipping agent and the association. To meet necessary expenses the association will have the membership fees of $1 per year and 1½ per cent on all consignments of its members.

(2) *The registered label.*—This is a device by which farmers aim to secure advantages in marketing their products by cooperating in much the same way that the members of the labor union profit by the use of the union label on such articles as cigars, hats, and clothing. In either case the label is registered and thus secure from infringement. The object in either case is to guarantee that the product has been made under approved conditions. The farmers attach their label to the products of their dairies, for example, and send them to the city, where laborers

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[1] As reported by E. G. Packard in the American Agriculturist, March 24, 1900.

are by far the most numerous consumers. The union-made goods of the city are in turn sold to country consumers. By the cooperation of these city consumers with rural producers and rural consumers with city producers, through the use of union labels, these two classes of workers can mutually afford each other a guaranteed market for the products of their labor, in preference to any other nonunion products. Milk, poultry, eggs, vegetables, and any other farm product bearing the registered label are at once recognized in the market by the consumer as the products of farmers working with himself for a fair price in return for his labor. The farmer may find at his local market implements, seeds, harness, and clothing with the union label, assuring him that these goods have been made by those who have received a fair wage for their labor in the production. This species of cooperation between those who work on the farm and those who work in the factory does not apparently aim at the elimination of the middlemen. It regards the consumer and the producer as cooperators on the common basis of mutual interests in the products of each other's labor. So far as the rural producer of farm products cooperates with the city producer of manufactured products, by the aid of the union label, to that extent will the consuming capacity of the city producer be increased and the demand for farm products be advanced. Likewise, so far as the factory operative of the city requires from his retailer the labeled products of the farm, to that extent will the increased demand of the better-paid operative increase the purchasing power of the union farmer, who consumes manufactured products. In either case, therefore, the union-label method of marketing, taken in connection with the union-made products of the factory consumed on the farm, improves the position of both producer and consumer of farm products without prejudicing the interests of the distributer.

The union-label movement is regarded by many of the most careful students of the problem of distribution as an effective solution by cooperation of the kindred interests of rural and urban labor. Under such conditions of united action the distributers, especially the mercantile portions of them, would be less masters of the situation and rather the servants of these allied interests. The successful operation of this plan, however, depends on the consumer's insistence on union-labeled goods. Only such an argument will bring merchants to terms. Wherever consumers cooperate to this extent, undoubtedly the union label may be regarded as the most important part of the entire labor movement. Speaking of its effect, the Farm and Factory, the exponent of the farmers' union label, says:

"The label idea has been in use among the trades unions for about ten years and has revolutionized the labor movement. To-day there are fifty trades having labels, and every month millions are used. Before the adoption of the label there was no way for the different trades to help one another except directly, but now by buying union-labeled goods the members of one trade can help those of another, no matter how far apart they are. Through the label the trades union and the farmers' union can cooperate and be of great help to one another. If the farmers have the help and support of those who consume their produce they can succeed, no matter what the middlemen do. That this is true is being demonstrated right here in Binghamton every day. The demand for union-labeled farm produce is greater than the supply. One instance as an example. A sales committee from a creamery tried to make a sale of butter for the coming year, and they were told by the merchants that if they would put the farmers' union label upon the product it would be bought, but not otherwise. There is no theory about this; it is in practical operation."

(3) *The soliciting agent.*—In the distribution of most farm products the soliciting agent is a necessary feature whenever the trade begins to compete for the supply. His appearance is often a sign of future rise in prices. He is apt to interfere considerably with the efforts of producers to organize and sell through their own association. Farmers are quick to cooperate as a general thing. This has been evident notably in the history of the cooperative movement among the orange growers of California. There, after making contract to sell through the association, many growers dispose of their crops to soliciting agents. This reappears at every point where producers propose to deal more directly with the trade in consuming markets. Where the soliciting agent is a cash buyer, much of the objection to his part in distribution is removed; but where he contracts in advance for sales for the season with the individual producer, who, as a rule, is in no position to know whether prices are likely to rule higher, there can be little benefit to the producer. The appearance of the soliciting agent, as a rule, represents a belief on the part of the trade in a rising level of prices.

The Eastern Shore potato farmers (Virginia), after having long been at a disadvantage in marketing this crop, have organized to do away with "the soliciting agent and sell through a limited number of commission merchants in the large distributing centers. The members of the exchange will refuse to deal with agents in any manner, and the rules of the exchange empower the directors to select receivers in New York, Boston, and Philadelphia through whom the members will sell their products. The receivers selected are to charge 10 per cent for selling. Of this 5 per cent is to be returned to the exchange to be used in defraying the expenses of the organization. Under the present system the commission dealer charges 8 per cent, of which 3 per cent is allowed the agent for the business he solicits. A membership of 2,500 shippers is claimed by the exchange. It is the intention of the exchange to control only the potato crop of the Eastern Shore. This, according to estimates furnished by the various transportation companies, amounts to several million barrels per year."[1]

The elimination of the soliciting agent is more or less likely to result from the progress of associative selling on the part of farmers; but such progress will depend more upon the ability of the association to enter into an adequate appreciation of the market's requirements as to grading, assorting, and packing than upon anything else. To possess this knowledge it must have some representative who is familiar both with the requirements of the market and with the methods of preparation. As grading and packing become better established, the soliciting agent will no doubt tend to be absorbed into the producer's end of distribution, where his services in preparing the product are most valuable. The effort to consolidate consignments to a smaller number of commission merchants through producers' associations tends strongly in itself to make the soliciting agent a fifth wheel in the system.

4. THE POTATO TRADE AND PRICES.

The development of the white-potato trade is one of the remarkable movements in distribution of farm products. The whole southern and eastern coast, by successive seasons, from South to North, ships extensively to the cities of the East and of the interior. Tennessee sends hundreds of carloads to Chicago, Cincinnati, and Indianapolis.[2] The trans-Mississippi and Northwestern States produce large surpluses. The value of the crop has aggregated as high as $108.000,000 for a crop of 183,000,000 bushels. Once only a garden crop for domestic use, it has become a commercial crop of fourth rank in bushels and of sixth rank in value. Corn, wheat, oats, hay, and cotton alone exceed it in value among our field crops. The yield per acre is phenomenal, ranging from 150 to 500 bushels. Thirty-one States and Territories produce over 1,000,0000 bushels each; nine of these produce over 10,000,000 bushels each. These are given in the order of their productive rank for 1899:

Nine leading States in potato crop.

States.	Production.	Average farm price, Dec. 1, per bushel.
	Bushels.	*Cents.*
New York	18,707,976	40
Iowa	19,847,800	23
Wisconsin	16,102,711	26
Illinois	15,648,192	41
Pennsylvania	15,243,815	43
Nebraska	13,494,610	25
Ohio	11,505,053	43
Michigan	11,430,210	32
Minnesota	10,888,608	25
Total	132,869,005	
Total for United States	228.783,232	

Fifty-eight per cent of the whole crop grows within these nine States. There are other States, such as Maine, New Jersey, and Kansas, where the production is large, the consumption small, and the surplus is sent to markets outside of the State. Rhode Island is to be classed with the surplus States in potatoes, as Connecticut is in onions.

The producer and the consumer are both affected by the relation of imports and exports of potatoes. At present these two movements nearly balance each other in volume, in the long run, as the figures below will show. In value, however, our exports are much greater than our imports. The tariff on imported potatoes is 25 cents per bushel, so that the domestic producer is amply safeguarded in that direction. The consumer's safeguard lies in the facility with which deficiencies in supplies in one part of the country can be shipped from other portions by rail or water at short notice. When prices in large consuming centers on the Eastern seaboard reach the level of 50 cents wholesale, imports are apt to prevent them from going higher:

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[1] The American Agriculturist, New York, 1900.

[2] Report of Tennessee Board of Agriculture, 1897-98, p. 145.

Year.	Potatoes.			
	Exports.		Imports.	
	Bushels.	Value.	Bushels.	Value.
1897	752,484	$506,408	586,213	$249,972
1898	544,467	410,017	808,330	371,131
1899	844,711	672,725	537,775	293,360

The range of prices are given below for St. Louis and for New York. Taking these as representative, it is evident that prices in the interior were sustained better than those at New York, which market is in competition with imported potatoes from the West Indies and Scotland:

Range of wholesale prices of potatoes.

[From the Crop Reporter.]

Dates.	New York.	St. Louis.	Dates.	New York.	St. Louis.
	180 pounds.	*Per bushel.*		*180 pounds.*	*Per bushel.*
September, 1897		$0.50-$0.65	November, 1899	$0.75-$1.50	$0.33-$0.44
September, 1898	$1.37-$2.00	.35- .50	December, 1899	.90- 2.00	.43- .48
January, 1899	1.25- 1.62	.39½- .45	January, 1900	1.25- 2.00	.43- .52
February, 1899	1.25 2.00	.42 .55	February, 1900	1.25- 2.00	.43- .50
March, 1899	1.25- 2.37	.53- .75	March, 1900	1.25- 2.35	.35- .46
April, 1899	2.00- 2.37	.56 .72	April, 1900	1.25- 1.75	.27- .40
May, 1899	1.00- 3.50	.40- .55	May, 1900	1.00- 1.62	.30- .45
June, 1899	1.00- 3.50	.42- .52	June, 1900	.75- 1.50	.36- .45
July, 1899	.50- 3.00		July, 1900	.50- 1.75	
August, 1899	.75- 2.00	.25- .30	August, 1900	1.00- 1.87	None.
September, 1899	.75- 1.50	.32- .40	September, 1900	1.00- 1.62	None.
October, 1899	.75- 1.65	.32- .40			

The principal source of supply for early potatoes for Eastern cities is in the South Atlantic States from Florida to Virginia. The water rates make it possible to handle vast quantities at low rates. These early arrivals compete with the Northern potatoes (old) during at least 3 months of the year.

5. STATISTICAL RESULTS IN NINE MARKETS.

The tables following give the proportion of consumer's cost in nine different markets that goes to producers and to distributers. Other vegetables are given likewise, with dairy and orchard products for comparison.

Summary: Prices and expenses of distributing produce.

Date.	Kind of product.	Consumer paid—	Producer received—	Expenses of distribution.	Per cent to distributer.	Per cent to producer.	Market.
					Per cent.	*Per cent.*	
May to July, 1899	Potatoes, white	75 cents per bushel	50 cents per bushel	25 cents per bushel	33⅓	66⅔	Richmond, Va.
May and June, 1900	do	50 cents per peck	$3 per barrel (3 bushels)	$3 per barrel (3 bushels)	50	50	Do.
Sept., 1899, to Mar., 1900	Potatoes, sweet	25 cents per peck	$1.25 per barrel (3 bushels)	$1.75 per barrel (3 bushels)	55	45	Do.
July, 1899	Potatoes, white (new)	$2 per barrel	$1.50 per barrel	50 cents per barrel	25	75	Washington, D. C.
Jan., 1900	Potatoes, white	75 cents per bushel	50 cents per bushel	25 cents per bushel	33⅓	66⅔	Do.
May, 1899, to May, 1900	do	20 cents per peck	12½ cents per peck	7½ cents per peck	37½	62½	Atlanta, Ga.
Nov. 1, 1899	Potatoes, white (Greeley).	60 cents per bushel	30 cents per bushel	30 cents per bushel	50	50	Denver, Colo.
Apr. 1, 1900	do	75 cents per bushel	42 cents per bushel	33 cents per bushel	44	56	Do.
Jan. to May, 1900	Potatoes, white	40 cents per bushel	30 cents per bushel	10 cents per bushel	25	75	Madison, Colo.
July, 1899	do	$2 per cental	$1.51 per cental	49 cents per cental	24½	75½	Portland, Oreg.
Jan., 1900	do	$1 per cental	61 cents per cental	39 cents per cental	39	61	Do.
June, 1899	do	60 cents per bushel	39 cents per bushel	21 cents per bushel	35	65	St. Louis, Mo.
Nov., 1899	do	38 cents per bushel	27.2 cents per bushel	10.8 cents per bushel	29	71	Do.
Yearly average July, 1899, to July, 1900.	do	80 cents per bushel	40 cents per bushel	40 cents per bushel	50	50	Wichita, Kans.
Sept., 1899	Potatoes, white (Ohio)	70 cents per bushel	45 cents per bushel	25 cents per bushel	36	64	Cleveland, Ohio.
Jan., 1900	Potatoes, white (Michigan.	75 cents per bushel	25 cents per bushel	50 cents per bushel	66⅔	33⅓	Do.
May to June, 1899	Cabbages	5 cents per head	1.5 cents per head	3.5 cents per head	70	30	Richmond, Va.
Oct. to Feb., 1899–1900	do	10 cents per head	2.5 cents per head	7.5 cents per head	75	25	Do.
May, 1899–1900	do	1.5 cents per pound	0.75 cents per pound	0.75 cents per pound	50	50	Atlanta, Ga.
Jan., 1900	do	12 cents each	$8 per 100	4 cents each	33⅓	66⅔	Washington, D. C.
July, 1899	do	5 cents each	$3 per 100	2 cents each	40	60	Do.
Dec. 1, 1899	do	$2 per 100 pounds	$1 per 100	$1 per 100	50	50	Denver, Colo.
Nov. 1, 1899	Onions	$1.50 per 100 pounds	60 cents per 100 pounds.	90 cents per 100 pounds.	60	40	Do.
Jan., 1900	do	40 cents per peck	75 cents per bushel	85 cents per bushel	53.1	46.9	Washington, D. C.
July, 1899	do	60 cents per peck	$1.25 per bushel	$1.15 per bushel	47.9	52.1	Do.
Average for 1899–1900	do	50 cents per peck	10 cents per peck	40 cents per peck	80	20	Atlanta, Ga.
Jan., 1900	Onions, dry	30 cents per peck	$1.75 per barrel	$1.85 per barrel	51	49	Richmond, Va.
Nov., 1899	Apples	do	$2 per barrel	$1 per barrel	33⅓	66⅔	Washington, D. C.
Apr., 1900	do	60 cents per peck	$5 per barrel	do	16⅔	83⅓	Do.
Oct., 1899, to Dec.	Winesap apples	25 cents per peck	$2.50 per barrel	50 cents per barrel	16	84	Richmond, Va.
	Pippin apples	37.5 cents per peck	$3.50 per barrel	$1 per barrel	22	78	Do.
Average for 1899–1900	Apples	50 cents per peck	10 cents per peck	40 cents per peck	80	20	Atlanta, Ga.
Season average	Strawberry	$2 per crate of 24 boxes.	$1.25 per crate of 24 boxes	75 cents per crate of 24 boxes.	37.5	62.5	Denver, Colo.
June, 1899	do	8 cents per box	3 cents per box	5 cents per box	62.5	37.5	Washington, D. C.

Summary: Prices and expenses of distributing produce—Continued.

Date.	Kind of product.	Consumer paid—	Producer received—	Expenses of distribution.	Per cent to distributer.	Per cent to producer.	Market.
					Per cent.	*Per cent.*	
Mar. to June, 1900	Strawberry	14 cents per quart	6 cents per quart	8 cents per quart	57.1	42.9	Atlanta, Ga.
Jan. to May, 1900	Eggs	20 cents per dozen	15 cents per dozen	5 cents per dozen	25	75	Richmond, Va.
June to Sept., 1899	do	15 cents per dozen	10 cents per dozen	do	33⅓	66⅔	Do.
May, 1899 to 1900	do	22.5 cents per dozen	12.5 cents per dozen	10 cents per dozen	44	56	Atlanta, Ga.
Jan., 1900	do	25 cents per dozen	18 cents per dozen	7 cents per dozen	28	72	Washington, D. C.
July, 1899	do	18 cents per dozen	11 cents per dozen	do	38.9	61.1	Do.
July 1, 1899	do	22.5 cents per dozen	11.5 cents per dozen	11 cents per dozen	48.7	51.3	Denver, Colo.
Jan. 1, 1900	do	25 cents per dozen	16.5 cents per dozen	8.5 cents per dozen	34	66	Do.
May 1, 1900	do	20 cents per dozen	12.5 cents per dozen	7.5 cents per dozen	37.5	62.5	Do.
June to Sept., 1899	Melons	1.5 cents per pound	0.75 cent per pound	0.75 cents per pound	50	50	Atlanta, Ga.
Aug., 1899	Watermelons	15 cents each	$5 per 100	10 cents each	66⅔	33⅓	Washington, D. C.
July to Sept., 1899	do	10 cents each	5 cents each	5 cents each	50	50	Richmond, Va.
All year of 1898	Tobacco, sun cured	7.25 cents per pound	6.75 cents per pound	1.5 cents per pound	6.9	93.1	Do.
All year of 1899	Tobacco, dark loose	$4.80 per 100 pounds	$4.30 per 100 pounds	50 cents per 100 pounds	10.4	89.6	Do.
	Tobacco, heavy shipping and seaport.	8¼ cents per pound	7¾ cents per pound	1.5 cents per pound	6	94	Do.
	Bright tobacco	5.5 cents per pound	5 cents per pound	0.05 cent per pound	9	91	Do.
Average of 1 year 1899-1900.	Florida oranges	50 cents per dozen	12 cents per dozen	38 cents per dozen	76	24	Atlanta, Ga.
	California and Sicily oranges.	30 cents per dozen	6 cents per dozen	24 cents per dozen	80	20	Do.
Jan., 1900	Oranges	15 to 30 cents per dozen					Washington, D. C.
Yearly average	Dairy milk	6 cents per quart	3½ cents per quart	2½ cents per quart	41.7	58.3	Denver, Colo.
May 1, 1900	100 pounds milk	$1.15 per 100 pounds	92 cents per 100 pounds	23 cents per 100 pounds	20	80	Do.
January, 1900	Butter	35 cents per pound	25 cents per pound	10 cents per pound	28.6	71.4	Washington, D. C.
July, 1899	do	25 cents per pound	19 cents per pound	6 cents per pound	24	76	Do.
January, 1900	Cheese	18 cents per pound	12.5 cents per pound	5.5 cents per pound	30.6	69.4	Do.
July, 1899	do	do	do	do	30.6	69.4	Do.
Every month	Milk	8 cents per quart	14 cents per gallon	18 cents per gallon	56.3	43.7	Do.
Average for one year of 1899-1900.	Sweet milk	28 cents per gallon	do	14 cents per gallon	50	50	Atlanta, Ga.
	Buttermilk	10 cents per gallon	5 cents per gallon	5 cents per gallon	50	50	Do.
	Country butter	15 cents per pound	10 cents per pound	5 cents per pound	33⅓	66⅔	Do.
	Creamery butter	25 cents per pound	18 cents per pound	7 cents per pound	28	72	Do.
	Cheese	16⅔ cents per pound	10 cents per pound	6⅔ cents per pound	40	60	Do.
All the year, 1899	New milk	6 cents per quart	6 cents per quart		0	100	Richmond, Va.
	New milk by city dealers.	do	3 cents per quart	3 cents per quart	50	50	Do.

July, 1899	Choice hops[1]	12 cents per pound	11.55 cents per pound	0.45 cents per pound	3.75	96.25	Portland, Oreg.
January, 1900	do	11 cents per pound	10.58 cents per pound	0.42 cents per pound	3.86	96.14	Do.

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[1] Hops in Oregon and Washington are in much the same position as wheat, inasmuch as they are produced so largely in excess of the coast consuming demand that the agents of the Eastern and foreign buyers set the price, instead of the consumer. The figures given above are representative consumers' quotations, the prices paid by brewers at the periods mentioned. The best factor in the distributive cost, from a grower's standpoint, lies in the fact that nearly all of the big hopyards in the State are located contiguous to the Willamette River, thus giving the grower a very low rate to market. There are also some large producing districts tributary to this market on the Cowlitz River, in Washington, the output from these yards taking the same rate by river steamer that is secured by the Oregon yards. It is this low freight rate which enables the producer to pay a commission of 2½ per cent for selling the crop, and at the same time dispose of his stock in a competitive market at a cost of distribution of less than half a cent per pound. There has always been considerable of a speculative element in the marketing of hops in these two States, and a fair-sized portion of the entire crop of Oregon and Washington has usually been sold outright to Eastern and foreign buyers on advance contracts made by agents before the vine has commenced to grow. While this method is still pursued to a considerable extent, the farmer has usually been a loser on the operation, for the reason that if hops advanced beyond the contract price he received no additional benefits, while if there was a decline the buyer would frequently seek to escape on the pretense that the stock was not up to grade, a not difficult manner of evasion where carelessness in curing and grading hops is practiced. An association of growers was formed to handle the 1899 hop crop of the State of Oregon. It would undoubtedly have met with a fair measure of success had the growers not insisted on securing prices in excess of values in other parts of the country. As it was, the association tied up between 20,000 and 30,000 bales of hops and held them above the market so long that consumers' wants in America and Europe were filled from other sections of the country at "going prices." The association is now in the throes of dissolution, with about 10,000 bales of hops still unsold, and those which have been sold were put on the market after the growers of California and New York had unloaded, and the prices realized were from 3 to 6 cents per pound less than could have been secured had the ruling prices been accepted at the time the association was first formed.

6. FEATURES OF THE FRUIT AND VEGETABLE TRADE.

Wherever the fruit or vegetable trade has been developed some distance from market complaints have arisen against what has been called the excessive express or freight rates between producers and the market. In the eastern part of North Carolina, as well as in southern Georgia and in the part of Texas about San Antonio and farther north, there is the same complaint of excessive charge for carriage of produce to market.

On the part of the railroads or express companies it must be said that the increased speed required in shipping vegetables either by express or freight entails extra outlay. The perishable nature of this commodity, which results in greater depreciation in quality by delay, and the great risks run by the carrier of having the cargo rejected at the other end of the route because the fruit is not fit for anything but the dump, are factors that render necessary higher freights than are charged on other farm produce of equal value, equal weight, and equal care in handling.

On the part of the shippers it must be said that their sales have netted them an abnormally low return on their shipments in probably the majority of cases and seasons. There have been good seasons, commercially speaking, for shipping producers; but it is probably undeniable that the greater proportion of the vegetables sent from the South to the Northern markets have sold at prices which net the producer but 50 per cent on the average of the price to retailers. The finest grades and qualities are exceptions to this general statement, but the bulk of the vegetable sales seems to have been made on this general basis of having lost more than half the price paid by the consumer for distribution. The facts brought out by comparing the amounts received by distributers and those received by growers of vegetables show a startling difference between producers and consumers' prices. The usual explanation is that depreciation is so great as to make an exceptionally low price to producers necessary. But, under existing system of handling fruits and vegetables, depreciation in quality is the exception rather than the rule, from the farm to the market. Some other explanation must be sought, either in the expenses of transportation or in the charges on distribution after the produce reaches the wholesale market. With the refrigerator-car service there is comparatively little depreciation in transit.

The facts are that producers of peaches, for example, at a distance seldom get more than half of the retail price, or the price to consumers. At Cincinnati, which is a good market for Georgia, Kentucky, and Ohio peaches, consumers in 1900 paid on an average $1.25 to $1.50 per bushel for a large crop, while producers received from 50 cents to 75 cents per bushel, according to the point of shipment and the quality. The expenses of distribution averaged 75 cents per bushel—that is, from 50 per cent to 60 per cent of the consumers' cost went to distributers, and from 40 to 50 per cent to producers.

The marketing of the Rocky Ford melon, produced in Colorado and sold all over the country, is another instance of excessively high cost of distribution. The difference between producers' prices and consumers' cost amounts to 75 per cent of the latter figure. Here the melon growers are so generally organized as to control three-fourths or four-fifths of the entire crop. The growers' organization contracts to sell the entire yield of its membership to one general distributer, who, having thus cornered the crop, is the only one from whom jobbers can get melons. These jobbers sell to the retailers. There are three intermediaries between producer and consumer, which insures an expensive method of distribution. Neither the producer nor the consumer is in a position to dispense with any one of these interests. Without the contractor, who takes the producers' crop, the farmer would not find markets. The distributer does that very thing, but can not sell to retailers. Here the jobber is necessary to distribute the supply received at local markets, and the retailer is equally indispensable.

The shipment of sweet potatoes illustrates one of the apparent difficulties in developing a profitable market for vegetables. High local rates are calculated to repress shipments—as, for instance, the rate of 26 cents per barrel of sweet potatoes (170 pounds) from Vineland, N. J., to New York, and 33 cents per barrel from Vineland to Pittsburg, Pa., about three times as far. Relatively, these rates are not equitable from the standpoint of the producer, but the low west-bound rate is due, no doubt, to the necessity of seeking freight on the cars which came East with grain and would otherwise return empty. If 33 cents pays somewhat more than expenses, it is a profitable rate. The effect of the relatively higher rate to New York is to give Southern producers the greater advantage. This sort of policy has kept New Jersey producers between the upper and nether millstone for some years. Local interests are sacrificed to the longer haul interests.

The distant producer has the advantage in another respect. His fruit and vegetables are usually carried in refrigerator cars, owned and operated under a guarantee to the producers or shippers that they will place the shipment upon the market in good condition, a special charge being made to cover refrigeration. These cars make a round trip between Fort Valley, Ga., and New York in 6 days and about the same from Goldsboro, N. C., to Boston, Mass. The local producer has no such expense, but likewise no such advantage. The Southern producers have been in the market a month or two before the Northern producer, near his own city market, is prepared to sell. These are some of the conditions which affect the producers of various times and places in the vegetable trade, and to a considerable extent account for low prices to producers.

THE DISTRIBUTION OF FRUITS.

The fruits of the orchard are as widely grown as farming itself. Every household almost has its fruit trees, if not its orchard, on whose annual yield it depends for domestic supply and for a surplus to market. Commercial fruit growing, on the contrary, is not so widely diffused. It is more centralized, but it changes from decade to decade. Just now western New York, Michigan, Virginia, Georgia, California, and Florida are all famous for their part in the commercial production of apples, peaches, oranges, and lemons, respectively, the four most noteworthy fruit crops of the country.

In the production of apples New York leads the East. Not many generations ago, before commercial apple-growing was established there, fruit was utilized almost wholly for cider and vinegar. Now, according to one of the heaviest dealers in fruits, the country's crop of apples last year amounted to 35,000,000 barrels, of which 5,000,000 were in cold storage in December. The market has been created and there is no end to its development.

The magnitude of the fruit trade of this country can best be presented by some striking facts by way of illustration. The orchard interests lie on both sides of and throughout the Allegheny Range in the East. On the lakes, Michigan is an orchard State. On the Pacific coast California is the leading State. Within a few years foreign markets have taken, in a single season, over one and a half million barrels of green and ripe apples (1897), and from 10,000 to 15,000 tons of dried apples during each of the past 3 years. In 1899, 30,000,000 pounds of prunes, raisins, and dried apples were exported. The Illinois Central Railroad carried 4,000 tons of apples and 2,000 tons of strawberries, besides large crops of peaches, pears, etc., into Chicago in a single year, mostly from the South. A single county in New York State (Orleans) marketed in a single year $265,000 worth of fruit.

The lower peninsula of the State of Michigan is geologically and climatically adapted for orcharding. For 3 years the State has been sending trained experts to farmers' meetings to make addresses and answer questions upon fruit growing. The effect of this combination has been to lift fruit growing into the front rank of Michigan industries. Though the productive life of a fruit tree is 8 years, there are peach trees in this region that have borne peaches from 18 to 25 years. There are plum orchards as thrifty as those of California or Oregon. Prunes and cherries are at home here; and potatoes from this section rank high in the Chicago market. Forty acres are enough for a fruit farmer. He has water and rail transportation. The main problem is to adjust the time of ripening so that the fruit crop of the South will be out of the way before the Northern fruits are ready for the market. Subject to this condition, no portion of the country is better situated than the Michigan fruit belt, with the two large markets of Milwaukee and Chicago so near at hand and with easy access to the East by rail and lake.

The acreage in apple and peach orchards by counties in Michigan is given herewith.

Apple orchards in Michigan in the year 1897.[1]

[As reported by Edwin C. Reid, secretary State Horticultural Society.]

Counties.	Acres.	Counties.	Acres.
Allegan	7,967	Livingston	4,637
Barry	5,354	Macomb	5,580
Berrien	7,227	Mason	2,191
Branch	5,393	Monroe	4,840
Calhoun	4,758	Montcalm	3,580
Cass	3,762	Muskegon	1,874
Clinton	6,308	Newaygo	2,265
Eaton	6,638	Oakland	10,265
Genesee	6,256	Oceana	3,211
Grand Traverse	2,676	Ottawa	4,310
Gratiot	3,835	Saginaw	3,516
Hillsdale	6,684	Sanilac	3,922
Huron	3,495	Shiawassee	5,087
Ingham	5,961	St. Clair	5,146
Ionia	6,273	St. Joseph	3,357
Jackson	5,308	Tuscola	5,149
Kalamazoo	3,966	Van Buren	7,578
Kent	7,719	Washtenaw	7,046
Lapeer	5,173	Wayne	5,519
Lenawee	7,517		

Peach orchards in Michigan in the year 1897.

Counties.	Acres.	Counties.	Acres.
Allegan	7,610	Newaygo	671
Berrien	3,181	Oakland	959
Ionia	2,422	Oceana	4,179
Kent	7,187	Ottawa	3,238
Mason	1,861	Van Buren	8,362
Muskegon	813	Washtenaw	1,271

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[1] Michigan State Agricultural Society, 1898, p. 705.

In the North and East Delaware has been for many years the source of supply of peaches. With progress in orcharding the peach-growing industry has traveled southward and westward. The prevalence of pests, which successfully attacked the trees in Delaware, finally broke the prestige of that State's influence in the market, and helped to spread peach growing into other States. The center of the Southern peach production is now located in southern Georgia, in the vicinity of Fort Valley. But rapid progress has been made in extending this crop all along the eastern slope of the Allegheny Range. In Connecticut peach orchards have increased in recent years until that State now markets a million and a half baskets.

The Georgia peach crop shipped this year was estimated at 3,000 carloads. In the course of its distribution two main lines are followed to the Northern and Western markets where they are usually sold. They reach the Northern and Eastern markets by way of Washington, mostly over the Southern Railway in refrigerator cars furnished by special car companies; and they go to the Chicago, Cincinnati, and other interior centers by way of Chattanooga.

Rates of expressage on peaches from Georgia.

From—	To—	Expressage per crate.
Fort Valley, Ga	Chicago	$1.00
Menlo, Ga	do	.76⅔
Chattanooga, Tenn	do	.66⅔
Fort Valley, Ga	St. Louis	1.00
Menlo, Ga	do	.76⅔
Chattanooga, Tenn	do	.66⅔
Fort Valley, Ga	Cincinnati	.63⅓
Menlo, Ga	do	.40
Chattanooga, Tenn	do	.30
Fort Valley, Ga	Chattanooga	.33⅓
Menlo, Ga	do	.10

The fruit-growing interests of Nebraska and Kansas have for some years attracted attention as successful competitors of the East and the South in the interior markets. The State Board of Agriculture reports only three and a quarter million fruit trees for that State; but, at Chicago, Nebraska peaches compete with the Maryland, Delaware, and Georgia product. Kansas apples are produced on a large scale for commercial purposes. The West is generally making such rapid progress in horticulture that it seems to be only a question of a few years when the Trans-Mississippi States will supply their own needs and compete more generally with the older fruit States in the larger markets. Here, again, the services of transportation lines must be relied upon to reach markets at economically advantageous rates to producers and consumers.

The fruit producers, following that of other industries, have begun to seek outlets in foreign markets for their products. Possibly no orchardists have done better than the Virginia shippers of the Albemarle district. These apples, for instance, have a favorite place in the estimation of some foreign consumers, as they no doubt deserve to have. The following bill of sale of a lot of Virginia apples in London is given to show the items of expense incurred in the shipment to the London market. The original copy was kindly loaned the commission by Mr. Murrell.

EXPENSES OF SHIPPING VIRGINIA APPLES TO LONDON, ENGLAND.

Account sales of (G. E. M.) 241 barrels of apples (Ex. steamship Paris). Sold by I. C. Houghton & Co., London, by order and for account of Mr. G. E. Murrell, Virginia, U. S. A.

	£. s. d.	£. s. d.
241 barrels (brought forward)		191 17 6
CHARGES.		
Freight 3 and 5 per cent	37 19 2	
Porterage, sampling, catalogues, sale expenses, etc	8 0 8	
Cablegram	5 0	
Brokerage and guarantee, 5 per cent	9 14 10	
		55 19 8
Net proceeds due January 18, 1896		138 17 10
Interest		11 5
		138 6 5

London, 18 December, 1895, pro I. C. Houghton & Co.

Summary of above statement in American equivalents.

	Amount.	Per cent.
Total value of 241 barrels apples in London market	$913.19	100
Total expenses in marketing	273.72	29.2
Net balance realized by producer	669.47	70.8

This statement analyzed shows (1) that 29.2 per cent of the price realized in London wholesale markets was required to pay the expenses of marketing the apples. (2) That 70.8 per cent of the London price was returned to the producer or shipper. (3) It costs less to freight a barrel of apples from Virginia to London (79 cents) than it does to ship a box of oranges from California to any point east of Colorado (90 cents). It costs (1899) about two and a half times as much to express a barrel of apples from Crozet, Va., as it costs (1896) to send a barrel of apples from Virginia to London. From Crozet, Va., to New York the rate on apples is $1.25 per 100 pounds, or for a barrel weighing 150 pounds the rate is $1.88. If such apples, on which the expense before leaving the depot is 60 cents per barrel, sold for less than $2.50 per barrel there would be no return to the producer. Here the rate seems to be practically prohibitive on the part of the railroads.

The following exhibit shows the expense of marketing Albemarle apples in the leading domestic market—New York. Two shipments are given, indicated respectively as No. 1 and No. 2:

NO. 1 SHIPMENT.[1]

Expenses itemized for shipping 1 barrel of a lot of 10 barrels of apples from Crozet, Va., to New York, in October, 1899.

[Selling price, per barrel, $2.50, in New York.]

Freight, per Chesapeake and Ohio and Pennsylvania Railway	$0.38
Commission 10 per cent on $2.50	.25
Drayage (proportion out of 10 barrels)	.03
(1) Total shipping expenses per barrel	.66
Cost of barrel	.30
Picking and packing	.20
Hauling	.10
(2) Total expenses f. o. b. cars, per barrel	.60
Cost of selling	.66
Cost of delivering at depot and packing	.60
(3) Total expense, orchard to market	1.26
Selling price	2.50
Less distribution expenses	1.26
Net proceeds to producer on this sale	1.24

NO. 2 SHIPMENT.

One barrel in a less than carload lot to New York from Crozet, Va., in 1899, lot sold at $2 per barrel.

Cost of marketing	$0.66
Cost of packing and delivering	.60
	1.26
Selling price	$2.00
	1.26
Net proceeds to producer on this sale	.74

In car lots (150 or more barrels) the freight is reduced 5 cents per barrel, a carload lot being charged at 33 cents per barrel.

In quantities of less than 10 barrels the charge for drayage is higher, no less price than 25 cents being charged for even a single barrel.

The charges are practically the same whatever the selling price may be. The above prices are taken as average prices for the season. Of course, with some fancy lots the net proceeds are higher, and if the price obtained is as low as $1.50 there is no profit to producer, as no charge has been itemized in the above for the twelve months' work to raise the crop, cost of land, etc., which may reasonably be taken at not less than 25 cents per barrel.

In shipment No. 1 the producer receives 49.6 per cent of the selling price in the wholesale market. In shipment No. 2 the producer receives but 37 per cent of the wholesale market price.

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[1] Data furnished by Mr. Walter Whately, Crozet, Va.

TRUCK OR EARLY VEGETABLES FROM THE SOUTH ATLANTIC STATES.

The trucking interest of Norfolk is very great, as all the farmers or truckers, as they are called, adjacent to the city are engaged in raising early vegetables, etc., for the Northern markets. From this source between $3,500,000 and $7,000,000 are annually returned, according to the size of the crops raised and the prices obtained. In the year of 1898 there were shipped from Norfolk, Va., as follows:

Asparagus	boxes	6,526	Kale[1]	barrels	77,473
Apples	barrels	2,860	Lettuce	do	1,149
Apples	baskets	15,584	Lettuce	baskets	12,335
Strawberries	quarts	12,221,700	Onions	barrels	717
Beans, lima	baskets	2,868	Onions	baskets	4,631
Beans, snap	do	160,967	Potatoes, sweet	barrels	42,531
Beets	barrels	4,747	Potatoes, Irish	do	461,924
Cabbage	do	321,032	Pears	baskets	4,936
Cucumbers	do	72,862	Peaches	boxes	800
Cucumbers	boxes	37,889	Pease	barrels	4,161
Cantaloupes	barrels	29,955	Pease	baskets	136,924
Cantaloupes	crates	20,639	Peppers	do	3,123
Grapes	do	7,297	Turnips	barrels	525
Radishes	barrels	15,047	Tomatoes	boxes	72,175
Spinach[1]	do	138,386	Watermelons		548,554
Squash	do	4,213	Squash	baskets	3,437

In the gathering of these crops thousands of men, women, and children are employed. These hands are paid daily and weekly.

These figures give some idea of the volume of this trade between Southern vegetable farms and Northern markets. One of the most hopeful indications of improvement in the position of the producers has been the formation of truck growers' associations, which, acting as a body, have succeeded in securing more satisfactory service from the transportation companies. The weakness of the vegetable trade is not in the railroad, but rather in the commission markets and in the lack of method in preparing goods for market.

The general conclusion to which a study of the vegetable trade leads is to the effect that before the defects of distribution can be removed the organization of producers must be developed far beyond its present degree of effectiveness. The producers as a class have altogether too little to say as to the methods of marketing their products. The main cause of this is that they act as individuals upon a system of distribution which they influence only to the extent that they understand its interests and agencies. When the tendency to cooperate on the part of producers of vegetable products reaches the point where they can combine in the selection of agents to act for them as a body and in the employment of means and methods which enhance the commercial value of their products, then producers will be far more prosperous as a class. There is no good reason why producers of vegetable supplies for commercial account of a given locality or on a given line of railroad should not combine in the East just as the California growers have combined. Combination is the only effective method of commercial improvements, and the sooner the tiller of the soil learns to utilize its advantages and to avoid its evils the better it will be for both producer, distributer, and consumer.

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[1] Incomplete; returns only partial.

PART FIFTEENTH.

SOME SPECIAL FEATURES OF DISTRIBUTION.

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1. EXPENSES OF HAULING TO LOCAL POINTS.

It has been shown, after careful inquiry, that the average haul of the American farmer in getting his produce to market, or to the nearest shipping station, is 12 miles. The average cost per ton for hauling over the common county roads is 25 cents per ton per mile, or $3 per ton for a 12-mile haul. Careful estimates, also, place the total tons hauled at 300,000,000 per year and the average haul at 12 miles, making the total cost of getting the surplus products of the farm to the local market or the railroad $900,000,000. This figure is greater than the operating expenses of all the railroads in the United States, which for the year ending June, 1898, were only $818,000,000.[2] In other words, it cost $82,000,000 more to haul farm products to the local points where they enter the distributive system than it does to operate our entire railway system, comprising nearly half the mileage of the world.

Estimates have been gathered by some States to show how expenses of hauling to local points compare with railway cost of carriage thence to the principal markets. The returns of West Virginia are given by counties in parallel columns, showing wagon and rail costs of transportation. These returns show that the two elements of expense are about equal.

The average cost of moving a ton of farm products to shipping point in 55 counties in West Virginia is $3.40, while the average expenses of shipping to the best markets by rail or water is $3.27. These estimates are made by farmers and shippers, and are based on actual experience in localities where costs of this kind do not vary much for the year.

A contrast such as this suggests that the defect in our system of distribution is not so much in our railroads as it is in our wagon roads.

There are two policies which European and American experiences suggest on this matter. One is that of a systematic improvement of highways under joint cooperation of the central and local authorities of each State; the other is that of utilizing light railways, as in England, or trolley extensions to rural village points, as in some parts of New England, for affording rural districts cheaper access to market. A trolley system connecting rural villages with a central town located on a railroad, thus affording a local market and a shipping point for a wide productive area, would seem to be an outlet for investment and enterprise which must sooner or later command the attention of city and country alike.

Cost of hauling to railroad and railway transportation to primary markets in West Virginia.

Counties.	Cost of moving farm products to shipping points, per ton.	Expenses of shipping to best markets, per ton.	Counties.	Cost of moving farm products to shipping points, per ton.	Expenses of shipping to best markets, per ton.
Barbour	$2.00	$1.50-3.00	Mingo	$3.50	$3.00
Berkeley	1.50	1.75	Monongalia	3.00	2.00
Boone	8.00	2.50	Monroe	4.00	3.00
Braxton	3.00	2.00	Morgan	1.50	1.75
Brooke	1.00	1.50	McDowell	6.00	3.50
Cabell	2.25	2.25	Nicholas	8.00	$2.00-12.00
Calhoun	9.00	5.00	Ohio	1.00	1.00- 2.00
Clay	3.00	1.50	Pendleton	....	12.00
Doddridge	3.50	3.00	Pleasants	2.00	1.50- 2.00
Fayette	3.50	3.00	Pocahontas	10.00	5.00
Gilmer	8.00	2.50-3.00	Preston	2.00	3.50
Grant	6.00	3.00	Putnam	1.50	1.50- 2.50
Greenbrier	2.50	3.00	Raleigh	5.00	4.00
Hampshire	3.00	2.50	Randolph	2.50	3.00
Hancock	1.50	1.50	Ritchie	4.00	2.50- 3.50
Hardy	5.00	3.00	Roane	4.00	1.50- 3.00
Harrison	2.00	2.00	Summers	3.00	2.00
Jackson	2.50	2.50	Taylor	2.50	3.00
Jefferson	1.00	1.75	Tucker	$1.00-2.00	1.20- 1.60
Kanawha	1.50	1.50	Tyler	2.00	4.00
Lewis	3.00	4.00	Upshur	3.00	3.00- 5.00
Lincoln	7.50	3.00-7.00	Wayne	2.00	2.50
Logan	5.50	2.50-3.00	Webster	5.00	2.00- 5.00
Marion	2.00	2.00-3.00	Wetzel	2.50	3.00
Marshall	2.00	1.00-2.00	Wirt	2.00	2.00
Mason	1.00	1.00-2.00	Wood	1.00	1.00
Mercer	5.00	2.75	Wyoming	7.00	2.00- 8.00
Mineral	1.50	1.25			

The methods of reaching markets for the products of the farm are in many parts of the country imperfect almost to the extent of being primitive, if not prohibitive beyond certain distances. Our public roads have not usually favored the farmer in the less developed States. Even in New Jersey the farmer living farther than 6 or 10 miles from Trenton, for example, must use the railroad for the purpose of marketing his products in larger markets. The use of the public highway to reach market is limited by the capacity of that market. In the most populous portion of the country the railroad is still the main agency for reaching markets.

In less populous States, such as West Virginia, it costs as much per ton to get farm products from the farm to the railway station as it does to freight it to the best market after it reaches the railroad. The minor farm products are less generally now, than formerly, carried by express to large markets in the East. The rates by express are often twice those by freight. The use of refrigerating freight cars has become so general that they now bring the greater part of the milk to market. Butter and cream still come to market quite largely from New England by express.

Butter receipts at St. Louis, 1899.

	Pounds.
By railroad	12,683,370
By express	1,012,305
By water	33,510

Cheese receipts of 981,345 boxes were wholly by railroad.

2. ELECTRIC LINES IN DISTRIBUTION OF FARM PRODUCTS.

The supreme court of New York has decided that the electric lines of Brooklyn may engage in a general freight and express business along their routes. This decision may have a far-reaching importance in the development of traffic between cities and their suburbs. Especially is it likely to serve as the legal basis for a new method of bringing truck products to central markets. From the farms and the trucking fields in the suburbs and outlying country these products can be delivered hourly, and with a promptness that must ultimately do away with wagon deliveries entirely.

Instances of the use of electric cars elsewhere are not entirely wanting, but as yet country producers have not begun to realize how helpful these new agencies would be for reaching the markets of the city. The light railways of England, Norway and Sweden, and of Germany have advanced much more in this direction than have the electric lines in the United States. Winston-Salem, N. C., has for some years utilized her trolley lines to some extent for transporting farm products; Williamsburg, Mass., reaches a more central market in a similar way, and Cleveland, Ohio, has one line (the Suburban) over which milk is brought from Willoughby, Ohio, to the Cleveland market. Between Memphis, Tenn., and Raleigh, a suburb 25 miles distant, there is an electric line over which produce is to some extent brought to markets in this way; but careful inquiry indicates that the entire development in this direction is yet in its infancy.

3. PUBLIC MARKETS FOR FARM PRODUCTS IN 52 TOWNS.

Towns.	Population.	Public markets.	Distance from which farm products are regularly hauled to market.
			Miles.
Richmond, Ind	22,000	2	6
Eldorado, Kans	4,500	....	25
Newton, Kans	8,000	0	12-15
Ottawa, Kans	8,000	1	30
North Adams, Mass	21,500	....	20
Cheyenne, Wyo	12,000	0	50
Cairo, Ill	20,000	0	30
Oil City, Pa	15,000	0	18
Kalamazoo, Mich	30,000	0	12
Keokuk, Iowa	18,000	0	20-25
Cumberland, Md	20,000	1	25
Beverly, Mass	13,000	0	4
Paducah, Ky	20,000	1	15-20
Northampton, Mass	17,000	0	20
Quincy, Mass	11,000	0	12
Lebanon, Pa	18,000	0	13
Millville, N. J	12,000	0	12
New London, Conn	19,000	0	5-8
Pittsfield, Mass	22,000	0	25
Bradford, Pa	....	0	30
Concord, N. H	17,000	0	16
Hornellsville, N. Y	15,000	1	15
Raleigh, N. C	18,000	1	40
Jackson, Tenn	18,000	0	....
Ogden, Utah	22,000	....	15
Abilene, Kans	....	0	10
Ithaca, N. Y	13,000	0	2
Leadville, Colo	15,000	0	4
Moline, Ill	20,000	0	30
Iola, Kans	8,000	0	20
Shamokin, Pa	18,000	1	25
Argentine Kans	7,000	0	10-12
Massillon, Ohio	14,000	0	10-15
Galena, Ill	15,000	1	10
Sioux Falls, S. Dak	15,000	0	....
Fort Smith, Ark	22,000	0	6
Roanoke, Va	24,000	1	25
Lansing, Mich	18,000	1	20
Hannibal, Mo	15,000	1	15
Alexandria, Va	17,000	1	....
Freeport, Ill	15,000	1	7-10
Emporia, Kans	9,000	0	5
Waddington, Kans	5,000	0	18
Independence, Kans	5,000	0	....
Chanute, Kans	5,500	0	20
Shreveport, La	50,000	1	5
Parsons, Kans	10,000	0	15
Junction City, Kans	5,000	0	10-15
Portland, Oreg	96,500	0	25
Jacksonville, Fla	33,000	1	15
York, Pa	30,000	4	15

4. THE ADVANTAGE OF LOCAL MARKETS.

The West and South, traditionally spoken of as devoted almost exclusively to agricultural interests, have both undergone a radical change within the past fifteen years. The change has come about by the rise of manufacturing cities and of factory towns. It has been said that within 60 miles of Chicago, for example, there is more capital invested in manufacturing than in all New England. Whether true or not, this statement emphasizes the actual westward tendency of manufacturing. Milwaukee is supplying machinery to Europe, Australia, and Africa.[1] Nine per cent of the population of Tacoma is employed in its factories. In the South the village has already created a new market for farm products. The concentrating of the rural population in these numerous small communities reduces competition among consumers of local farm products. There are now 441 cotton mills in the Southern States, representing possibly 300 different consuming centers or local markets. Formerly the surplus farm products passed through the hands of the local dealer for shipment to cities. Now the local consumer competes with the city consumer for the same supply. This new relation of the producer to the market shows the advantage of the new agricultural order, in which the local market makes practically the diversification of crops which has been preached for so many years with little effect. Variety of crops is not practicable as a rule without a local market.

Prices for local products are, as a rule, better than for a similar product from a distance. This rule is almost universal. Strawberries in a Kansas town sell regularly at from 1 to 2 cents per box higher than imported berries.[2] The same is true of vegetable and berry crops in certain markets in Massachusetts, where the Southern and the Northern crops of berries compete to some extent. The local product arrives in better condition on the market than the more distant one.

The competition of the different harvest zones of berries is perhaps more apparent than real. The New Jersey grower of strawberries finds that consumers in Philadelphia and New York, his best markets, have reached a considerable degree of satiety with successive supplies from Florida, the Carolinas, and Virginia, in advance of the Jersey harvest. The keen edge of the demand has already been taken off, and the local supply enters a half-hearted market. The truth of this view depends somewhat on the season; but it is quite true, on the contrary, that the Southern supplies, at the comparatively high price of early berries, reach only a limited class of consumers, who can afford to pay luxury prices. This price falls as the point of production approaches the center of consumption, and thus reaches the level of the purchasing power of the great mass of consumers. By the time the local supply comes into the market the largest number of consumers are beginning to buy rather than quitting.

5. SOME PHASES OF THE RETAIL TRADE.

The final stage in distribution of farm products for the great mass of small consumers is the retail store. Retail prices, therefore, are of primary importance to a very large class of the community—a class, too, which is not always in position to learn whether the local market price is excessive or not. The nature of certain communities is conducive to charging an unnecessarily high price for staple products. This is the case where working people are dependent upon company stores, as in coal regions, mining and lumber camps, on the plantations of the South, and more or less so in small markets generally.

In every company store there is an element of monopoly sustained by a kind of industrial coercion which affects the level of prices unfavorably to the consumer. However free the consumer may be to buy elsewhere, nothing other than the knowledge that he risks his position by doing so leads him to pay a higher price at a company store than at a private store. This difference is simply an insurance premium paid to keep his job. What it amounts to is shown by the following table of comparative prices at fifteen company stores and private stores in New Jersey. The groups of products are those which enter into the fixed cost of family expenditure:

Kind of products.	Company store prices.	Private store prices.	Excess of prices at company store.
			Per cent.
cereals	$1.93	$1.74	11
Vegetables	1.45	1.31	11
Butter and eggs	1.89	1.72	10
Meat	3.30	2.87	15

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[1] Forty-first Report of Trade and Commerce of Milwaukee, pp. 36-37.

[2] Kansas Experiment Station Bulletin, "Profits in strawberry growing."

For every dollar of expenditure for these products the consumer paid from 10 to 15 cents more than the market price. It does not take much economic insight to recognize that this is a tax which distributers impose upon consumers whom they hold in industrial subjection by reason of the wage relation.

Differences in retail prices at Bridgeton, N. J.

Kind of product.		Company store prices.	Private store prices.	Excess of profit at company store.
				Per cent.
Wheat flour	per bag, 20 pounds	$0.60	$0.50	20
Potatoes, white	per bushel	.90	.80	13
Beef, round steak	per pound	.15	.14	7
Mutton	do	.16	.12	33
Pork, fresh, chops	do	.12¼	.10	25
Pork, salt	do	.10	.06	66
Ham	do	.12	.09	33
Butter, first quality	do	.35	.28	25
Butter, second quality	do	.30	.22	36
Cheese, best	do	.18	.14	29
Oatmeal	do	.04	.03	33
Rice	do	.09	.08	12
Eggs	per dozen	.18	.15	20

Yet the retailer fills a necessary place in the distributive economy. On his enterprise the development of trade depends largely. "The retailer," says a close observer of commercial conditions in cities, "is, after all, the backbone of the commercial world. He takes the goods of the wholesaler and distributes them to the people. He bears the brunt of existing poverty; by trusting the poor in times of distress he often tides him over to brighter days. He merits large consideration. He has a hard enough time of it. What with the department stores on one hand and the push carts on the other it is a wonder how he can live. He has to pay rent and light and heat and wages and insurance, while the push carts that crowd the street right in front of his door, selling the same goods that he sells, have no rents to meet, no insurance, and no taxes, excepting an insignificant license fee."[1]

6. THE CITY CONSUMERS AND THE RETAIL MARKETS.

In the existing organization of the distributive system the position of consumers as a whole in large cities undergoes radical changes with the growth of population. The city having from 100,000 to 500,000 inhabitants finds it necessary, in order to supply its consumers, to introduce wholesale distribution between retailer and producer. The smaller city, however, relies on the weekly or semiweekly farmers' market or on the local retailer entirely. The largest of our cities represent consumers in an entirely different relation to the trade. The old-fashioned way of marketing required the household to lay in a supply once or twice a week. This was done at farmers' markets, as is still the case in such towns as York, Reading, and other towns in Pennsylvania, where the producer and consumer come together. The opposite of this simple relation has developed in such cities as New York, where living in tenements, flats, and apartments, prevails. Here ground space is so valuable that all possible economy of floor space must be exercised in planning the building in which families live. Possibly the great majority of families in the borough of Manhattan live in two or three room apartments. One of the denser portions contains nearly 600 persons to the acre. On an average of 5 persons to a family, this is equal to 120 families. Another block in another section of the city contained 390 families on one side of the block only. On an average each family occupied as many rooms as they had children.

With space so precious it is impossible to keep any considerable supply of food on hand in the tenement or city household. There are, of course, in the better class of apartments spaces for refrigerators, but they are small; and if the refrigerator is a stationary one, it is all the worse for cleanliness. It often becomes impregnated with an odor that destroys the palatableness of food put there unless kept scrupulously clean.

Ventilation required for preserving food supplies is imperfect in most cases, bad in many, and in a large percentage of apartments absolutely damaging to the palatableness of food. These conditions make it necessary not only for retailer and wholesaler to keep on hand much larger stocks than under different conditions of living, but they also oblige the retail trade in particular to do from 3 to 6 times the work that was formerly done when once or twice a week the consumer did his own marketing. In addition to this the retailer now delivers daily, or often 3 times a day, at the consumer's household the supplies of the day. Whereas formerly the consumer went to market once or twice a week, now the market comes to the consumer once or twice a day. This is particularly the case with vegetables and meats. This extra service must be paid for in the price to the consumer, and the heavy expense of this extension of retail service explains to a great extent the large proportion of the cost of distribution between wholesaler and consumer, especially in the more perishable kinds of products. The difference in consumer's price for a family which goes to market and for one which has the market come to it is not less than from 10 to 15 per cent. Take 2 families of about the same standard of living; the housewife that goes personally to market buys at a lower rate for the same quality of products or gets a better quality at the same price as compared with the one that simply sends orders or sends a servant. A further advantage to the consumer arises where the one buying for the family visits different retail stores instead of buying only from one. A still further gain to consumers, in point of time and choice of variety, comes from a public market at which the grades and quantity in the market can be observed before purchasing.

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[1] New York Charities, Vol. IV, No. 10, p. 12, Feb. 3, 1900.

7. ANIMAL AND VEGETABLE FOOD IN FAMILY DIETS.

The future of consumption of vegetable products has much to gain from improvements in the selection of food materials for the family in the city markets. Dietary practice is far behind the conclusions of science in this respect. A watchman's family in New York City, for instance, paid $5.69 for animal food, when $1.25 worth of vegetable food would have furnished an amount of nutriment equal to that of the animal food that cost just four and one-half times as much. The result of dietary studies in New York City shows that 70 per cent of the total cost of diet was expended for animal food—chiefly beef, eggs, butter, and milk—in a carpenter's family. In a mechanic's family the proportion of expenditure per man per day was 56 per cent for animal food and 44 per cent for vegetable food.

	Animal food.	Vegetable food.		Animal food.	Vegetable food.
	Per ct.	*Per ct.*		*Per ct.*	*Per ct.*
Jeweler's family	67	33	Housekeeper's (widow's) family	46	54
Sailor's family	62	38	Laborer's family	67	33
Watchman's family	70	30	Porter's family	67	33
Dyer's family	63	37	Printer's family	59	41
Restaurant carver's family	57	43	Milkman's family	55	45
Sailor's boarding house	73	27	Caretaker's (woman's) family	72	28
Truckman's family	59	41	Builder's family	66	34
Sewing woman's family	56	44	Salesman's family	71	29
Shopkeeper's family	53	47	Roofer's family	27	73

8. THE LEGAL PROTECTION OF CONSUMERS OF FARM PRODUCTS.

The old Latin maxim, warning the buyer to beware of the seller, applies to the producers and consumers of farm products with special emphasis. In modern times the two parties—consumers and producers—are so far apart in many commercial transactions, there are so many intermediate parties between the farm and the consumers of food, that it is difficult to fix responsibility for defective goods. Hence the State has stepped in and elaborated a growing body of laws in which the rights of the consumer are recognized and enforced. The consumer is entitled to protection from disease and filth and fraud. The milk-inspection laws are instances of the way in which the State has improved the position of the consumer. The inspection of herds of cows on the milk farm has carried the State's interest in the consumer back to the control of the very source of supply. The common defects among herds have been disclosed and the conditions of healthful production improved. Adulteration has been diminished, if not quite eliminated, and even the feed of milch cows has been in not a few cases limited by legal enactment in the interest of the consumer. The importance of milk as a food to the rising generation makes the stake of society in this class of consumers one of the most vital significance to the economic welfare of the community.

9. BRITISH RAILWAY RATES ON AGRICULTURAL PRODUCE.

THE RAILROADS AND THE FARMERS.[1]

[From the Railroad Gazette. By W. M. Acworth, barrister at law.]

I will begin with a statement which I am convinced most of my hearers will refuse to believe, that English railroad rates for the conveyance of agricultural produce are not excessive. I will go so far as to say that, compared with the rates in force in other countries for similar quantities of similar articles under similar conditions, they are low rather than high. I give this as an opinion based on a study both practical and statistical of the conditions in this and other countries which has extended now over a good many years. In the case of railroad rates, where the tariffs of different countries are constructed on different bases, deal with different average quantities, carried for different average distances, and under absolutely different conditions, figures may in the hands of a manipulator who knows the very rudiments of his business be made with consummate ease to prove anything he wants them to prove.

Let me give you one instance of English railroad rates. For the sum of 4d. the Great Eastern Railway will bring from any part of its district, say an average distance of 80 or 100 miles, into London, and deliver free to the consumer's door a box weighing up to 20 pounds. Such a box will hold, for instance, a pair of ducks, a couple of pigeons, a dozen eggs. 2 pounds of butter, and leave room to fill up with trimmings in the shape of sausages, tomatoes, flowers, or anything the grower may have handy. The minimum value of the contents can hardly be put lower than 10s. to 12s. It will surely not be said that 4d. out of 12s. is an excessive amount to pay for carriage. Look at the matter from the railroad point of view. The minimum charge made by the local parcels delivery companies in London is 4d., and I am assured by a friend of great experience that 3d. is a moderate estimate of the actual minimum cost of delivering a parcel by a railroad cart. This leaves the company 1d. for receiving the parcel at the country station, carrying it by train 100 miles, transferring it at the London terminus and keeping the accounts of the whole transaction. * * * It would not be fair to suggest that these extraordinarily low Great Eastern rates are typical of those in force all over the country. * * * But I recently had the opportunity of comparing the rates for farm produce now existing on one of our great lines with those that were in force three years back. These reductions range from 10 to 20, and in many cases to 30, 35, and even 40 per cent. I have no reason to believe that the case of this particular company is in any way exceptional.

On the whole, I believe a fair statement of the case is somewhat as follows. The rates in England for the carriage of small consignments of perishable produce are at least as low as those in force in France, Germany, or America; having regard to the speed and general convenience of service, they might even be said to be lower. At the same time agriculturists in foreign countries do get a great deal of their produce carried at less than English rates because they send it in quantities and under conditions which English agriculturists refuse to accept. If, however, English farmers will consent to adopt foreign methods, English railway companies have already shown themselves ready to concede them in return foreign terms. In a word, English agriculturists send their produce in retail quantities at rates which for retail quantities are low. Foreigners send wholesale at rates naturally much lower.

I turn to another point. Thanks not to the railroad companies, but to English geography, our rates are less burdensome than the foreigners' for another reason. In America production and consumption are separated almost by thousands of miles; even on the Continent Paris and Berlin draw their supplies from the farthest corners of the country. In this small and thickly populated island the average distance produce is carried can hardly, except in the southwest of England, amount to more than 50 miles. Now, it needs no argument to show that if an American farmer, though paying only ¼d. per ton per mile, has to pay that farthing for each of 500 miles, the railroad rate presses more severely on him than it does on an English farmer who only sends 50 miles, even though he may pay 1½d. per mile.

It is hardly, I think, generally appreciated how small a proportion railroad rates bear to the total cost of ordinary articles of consumption. Meat is worth say 6d. a pound and 1d. per pound in convenient though rough reckoning equals £9 per ton. A ton of meat is worth, therefore, over £50 A ton of butter is worth at least £100. Now, 50s. is a very unusually high rate for meat, and still more unusually high for butter. The half of these rates is probably quite as much as the average-distance consignment pays. In other words, a ton of meat pays for railroad carriage from 2¼ to 5 per cent on its value, a ton of butter certainly not more than 1¼ to 2½ per cent. Take even the instance where the railroad rate presses the hardest. The consumer pays for milk 1s. or 1s. 4d. per gallon; the railroad company gets out of this somewhere about, on the average, ¾d., say 7 per cent. * * * When we know that the gross retailer's profit ranges anywhere from 20 to 100 per cent on the price as received for the article by the producer, it is absurd to say that 1¼ to 7 per cent on the retail price, or if you will, 2½ to 14 per cent on the producer's price, is a charge that strangles trade. Indeed, considering the value and the indispensability of the service rendered by the railroad company, and the enormous cost at which that service is furnished, it may fairly be claimed that the railroads only charge a very low percentage. * * *

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[1] From the transactions of the Surveyor's Institution, London.

Let me give an instance of the strangling trade theory when brought to the test of actual facts. Members of the institution will, I dare say, remember the action brought two or three years back before the railway commission by the Mansion House Association on Railway Traffic against the South Western Railway in reference to the Southampton import rates. In that action, the cost of which, oddly enough, was defrayed by a London dock company, much was said to the grievance of the Surrey makers of cheese and the Hampshire producers of bacon. The rates, it was said, strangled trade, and the figures certainly showed that Fareham, for instance, only sent to London a few hundredweight of bacon in the twelvemonth. But unfortunately for the trade-strangling theory the figures also showed that the same rates which were supposed to prevent the transmission of bacon from Fareham to London did not prevent the Fareham consumer from bringing down from London some hundreds of tons of bacon during the same period. Here is another instance to the same effect. A general manager told me the other day that his railroad brought into England and up to London last autumn some five or six hundred tons of blackberries through a single port. The rate he got for their carriage was, as he expressed it, "a good fat one." He only wished, he went on to say, that he could have got English blackberries to carry at the same rate; fortunately they were not forthcoming. It was not these extortionate railroad rates which enabled the foreigner to do a presumably profitable business, or which left tons upon tons of blackberries unpicked on our Devonshire hedges.

We all want lower railroad rates, English farmers included. And English farmers at least can have them if they choose, to their own great advantage and also to the profit of the railroad companies; but to get them the farmer must abandon his old-fashioned retail methods in favor of modern economical wholesale methods of business. Let me give you one instance to show the enormous economy of the wholesale business. In the Southampton Docks case, to which I have already alluded, it was shown that American bacon, which was consigned in truck loads, and often in train loads, was charged 6s. per ton between Southampton and London. English bacon, consigned not in train loads but in parcels of a few hundredweight, was charged for an equivalent distance 15s. per ton. "Favoring the foreigners, surely," said the plaintiffs. But the defendants produced carefully detailed evidence, which was not cross-examined and hardly challenged, showing that at the 6s. rate the American produce gave them a gross earning of 12s. 6d. per train mile, while the train which had to potter about at roadside stations picking up the English farmer's odds and ends of traffic only managed to earn some 5s. per mile, and the cost of working the local train was, if anything, greater than that of working the train fully loaded with import traffic. Just see what this means. Cost of working averaged about 2s. 6d. per train mile. Therefore, with American produce the net earnings per train mile was 10s., with English produce 2s. 6d. In other words, by adopting wholesale methods the railroad company earned a four times greater profit, while charging a rate only two-fifths as high.

Now, of course, I am not suggesting that under any conceivable circumstances a roadside station in Hants or Wilts could furnish traffic to match in volume that which is poured in through great ports like Southampton, or Hull, or Liverpool. * * * But what I do say is that English farmers can, if they choose, command rates much nearer the wholesale scale than they are paying at present.

APPENDIX A.

STATEMENT OF THE GRAIN ELEVATORS, WAREHOUSES, AND MILL FACILITIES ON THE NORTHERN PACIFIC LINES, JUNE 1, 1900.

[Furnished by the Northern Pacific Railway Company.]

The following schedules have been inserted to show the equipment of a representative grain-carrying railroad for the purpose of handling this commodity. Few people have an adequate conception of the capacity, the variety in ownership, and the operating control of these facilities for handling the commercial grain crop of the Northwest. The data here presented is not readily available, and has recently been sought for by foreign inquirers. The presentation of the exact number of grain-handling facilities at local stations and at terminal points affords, moreover, the best kind of data to understand the position of the producer.

KEY TO STATEMENT.

(A) Grain-buying firms (line elevator companies) whose central offices are located at primary markets.
(B) Houses owned or operated by local dealers.
(C) Houses owned or operated by farmers' associations.
E=Elevator.
W=Warehouse.
M=Mill.
Location of offices of line elevator companies controlling elevators and warehouses in Minnesota and North Dakota: Monarch Elevator Co., Andrews & Gage (Lessees Consolidated Elevator Co.). Thorpe Elevator Co., Great Western Elevator Co., Johns & Powers, Duluth Elevator Co., Cargill Elevator Co., Victoria Elevator Co., Independent Elevator Co., Minneapolis.

Station.	Owner.	Building.	Capacity.	Remarks.
Minnesota division.				
			Bushels.	
Cable	(A) Great Western	E.	30,000	
Rice	(A) Jones & Powers	E.	20,000	
	(B) J. Gozett	E.	5,000	
	(C) Rice Farmers' Elevator Co.	E.	20,000	
Royalton	(B) J. W. Bauck	W.	5,000	
	(B) Murphy Mill and Elevator Co.	M-E.	10,000	
	(B) J. H. Russell	W.	3,000	
Littlefalls	(A) Monarch Elevator Co.	E.	40,000	
	(B) Minnesota Elevator, East Side, Mill.	M-E.	7,000	
	(B) A. Tanner	M-E.	15,000	
Lincoln	(B) L. J. Pickett	W.	5,000	
Topeka	(A) Monarch	W.	5,000	
Fort Ripley	(A) Monarch	W.	5,000	
	(B) A. Tanner	W.	2,000	
Brainerd	(A) Monarch	W.	5,000	
	(B) Holst & Rennels	W.	3,000	
Motley	(A) Monarch	W.	5,000	
Staples	(A) Monarch	W.	7,000	
	(B) W. J. Lewis	E.	10,000	
Aldrich	(B) B. H. Pettit	E.	16,000	
Vendale	(A) Consolidated	E.	25,000	
	(B) B. H. Pettit	E.	25,000	
Wadena	(A) Consolidated	E.	75,000	
	(A) Monarch	E.	9,000	
Bluffton	(A) Consolidated	E.	15,000	
New York Mills	(A) Consolidated	E.	20,000	
	(A) Monarch	E.	25,000	
Richland	(B) Sugden & Reinhart	W.	10,000	
Perham	(A) Consolidated	E.	40,000	
	(A) Independent	E.	12,000	
	(B) Globe Mill Co.	M-E.	80,000	

Station.	Owner.	Building.	Capacity.	Remarks.
Minnesota division—Continued.			*Bushels.*	
Luce	(A) Monarch	E.	15,000	
Frazee	(A) Monarch	E.	15,000	
	(B) Gummer & Chilton	M-W.	5,000	
Detroit	(A) Consolidated	E.	20,000	
	(A) Independent	E.	14,000	
Audubon	(A) Consolidated	E.	25,000	
	(A) Monarch	E.	15,000	
	(A) Independent	E.	15,000	
Lake Park	(A) Consolidated	E.	40,000	
	(A) Independent	E.	25 000	
	(B) John Nannestad	E.	10,000	
Winnipeg Junction	(B) Dakota Elevator Co	E.	20,000	Headquarters, Fargo.
Hawley	(A) Consolidated	E.	18,000	
	(A) Duluth Elevator Co	E.	25,000	
	(B) Ritterman Elevator Co	E.	15,000	
Glyndon	(A) Duluth Elevator Co	E.	30,000	
	(B) Mensings House	E.	25,000	
Moorhead	(B) Consolidated (subleased to Goldheart Milling Co.).	E.	125,000	
	(B) F. Goodsell & Co	2 Ws.	50,000	
	(B) V. Fisher	2 Ws.	25,000	
Littlefalls and Dakota Branch (Minnesota).				
Swanville	(A) Monarch	W.	10,000	
Burtrum	(B) S. Stewart	W.	12,000	Headquarters, Morris.
	(B) A. Tanner	W.	3,000	
Grey Eagle	(B) A. Tanner	E.	10,000	
	(B) R. H. Sliter & Co	W.	15,000	
Sauk Center	(C) Farmers' Elevator Co	E.	15,000	
	(B) Merchants' Grain Co	E.	25,000	
Siles	(A) Monarch	E.	15,000	
Westport	(A) Monarch	E.	20,000	
	(A) Great Western	E.	15,000	
Villard	(A) Monarch	E.	20,000	
	(A) Great Western	E.	33,000	
Glenwood	(A) Monarch	E.	25,000	
	(B) Robert Wilson	W.	3,000	
Starbuck	(A) Monarch	E.	35,000	
	(C) Farmers' Warehouse Co	E-W.	10,000	
	(B) S. Stewart	E.	25,000	Do.
	(B) Englund & Ness (leased to Hokinson Grain Co.).	E.	10,000	
Cyrus	(A) Monarch	E.	20,000	
	(B) S. Stewart	E.	35,000	Do.
	(C) Farmers' Warehouse Association.	E.	20,000	
Morris	(B) S. Stewart	E.	45,000	Do.
N. P. Fergus and Black Hills Branch (in Minnesota).				
Deercreek	(A) Consolidated	E.	45,000	
	(C) Farmers'	E.	5,000	
Henning	(A) Consolidated	E.	25,000	
	(A) Monarch	E.	20,000	
	(C) Farmers	E.	20,000	
	(A) Great Western	E.	33,000	
Vining	(A) Consolidated	W.	15,000	
	(B) T. H. Fraslee	E.	15,000	
	(B) Farmers	W.	10,000	H. P. Berg, lessee.
Clitherall	(A) Consolidated	E.	15,000	
	(B) Farmers	E.	8,000	E. Johnson, lessee.
	(A) Independent	E.	10,000	
	(B) J. Marstod	E.	5,000	
Battle Lake	(A) Consolidated	E.	45,000	
	(A) Monarch	E.	35,000	
	(B) Farmers	W.	8,000	H. & A., lessees.
Underwood	(A) Consolidated	E.	15,000	
	(B) Farmers	W.	6,000	W. Robertson, lessee.
Wall Lake	(B) Farmers	W.	5,000	J. W. Wilson.
Fergus Falls	(B) Dakota Elevator Co	E.	12,000	Headquarters, Fargo.
	(B) Jas. Sherwin	W.	5,000	
French	(A) Monarch	E.	15,000	
	(B) French Fanning Co	2 Ws.	29,000	Private.
Foxhome	(A) Great Western	E.	35,000	
Everdell	(A) Monarch	E.	20,000	
Breckenridge	(A) Consolidated	E.	20,000	

Station.	Owner.	Building.	Capacity.	Remarks.
N. P. Fergus and Black Hills Branch (in North Dakota).				
			Bushels.	
Wahpeton	(A) Consolidated	E.	20,000	
Farmington	(A) Great Western	E.	30,000	
	(A) Monarch	E.	15,000	
Adams	(B) W. P. Adams	E.	90,000	Private.
Greatbend	(A) Monarch	E.	30,000	
	(A) Great Western	E.	33,000	
Bayne	(B) Keystone Land Co	E.	60,000	Do.
Downing	(B) Downing Farm	E.	85,000	Do.
Mooreton	(A) Consolidated	E.	25,000	
	(A) Monarch	W.	7,000	
	(A) Independent	E.	15,000	
Wyndmere	(A) Consolidated	E.	40,000	
	(A) Monarch	E.	25,000	
Delamere	(A) Elevator (Consolidated)	E.	15,000	
	(A) Warehouse (Consolidated)	W.	10,000	
	(A) Independent	E.	15,000	
Milnor	(A) Consolidated	E.	40,000	
	(A) Monarch	E.	25,000	
	(A) Thorpe	E.	20,000	
	(C) Farmers	M-E.	4,000	
Manitoba Division (in Minnesota).				
Hitterdal	(A) Great Western	E.	10,000	
	(B) Dakota Elevator Co	E.	15,000	Headquarters, Fargo.
Ulen	(A) Thorpe	E.	25,000	
	(A) Great Western	E.	10,000	
	(A) Monarch	E.	20,000	
	(B) Evanson Bros	W.	5,000	
	(B) Wilcox Lumber Co	W.	4,000	Coarse grain.
Syre	(A) Thorpe	E.	20,000	
Twin Valley	(A) Thorpe	E.	35,000	
	(A) Monarch	E.	15,000	
	(A) Great Western	E.	18,000	
	(B) Farmers	W.	6,000	Dakota Elevator, lessee.
	(B) J. K. Welum	W.	1,000	Coarse grain.
	(B) Wilcox Lumber Co	W.	1,000	Do.
Gary	(A) Thorpe	E.	40,000	
	(C) Farmers	E.	25,000	
	(A) Great Western	E.	25,000	
	(A) Monarch	E.	15,000	
Fertile	(A) Thorpe	E.	40,000	
	(A) Monarch	E.	15,000	
	(A) Great Western	E.	30,000	
	(C) Garfield Farmers	E.	10,000	
Holmes	(A) Monarch	E.	15,000	
Marin	(A) Monarch	E.	15,000	
Crookston	(B) McCarthy Bros. & Co	W.	6,000	
Hixon	(B) McCarthy Bros. & Co	W.	6,000	
Freemans	(A) Thorpe	E.	15,000	
McDonald	(B) Wm. Stead	E.	20,000	
Lees	(A) Thorpe	E.	15,000	
Perault	(A) Thorpe	E.	16,000	
Redlake Falls	(A) Thorpe	E.	25,000	
	(A) Monarch	E.	20,000	
Dorothy	(A) Thorpe	E.	20,000	
Buffington	(A) Thorpe	E.	20,000	
Key West	(A) Monarch	E.	15,000	
Davidson	(B) Keystone Farm	E.	70,000	Private.
Sherack	(A) Monarch	E.	25,000	
Carthage	(A) Monarch	E.	25,000	
Sullivans	(Blank)			
East Grand Forks	(A) Monarch	E.	30,000	
	N. P. Rwy. (Transfer elevator for steamboat line.)			
Manitoba Division (in North Dakota).				
Kellys	(A) Thorpe	E.	15,000	
	(A) Duluth Elevator Co	E.	20,000	
Mekinock	(A) Consolidated	E.	25,000	
	(A) Monarch	E.	15,000	
	(A) Duluth Elevator Co	E.	25,000	
Beans	(A) Consolidated	E.	15,000	
	(A) Monarch	E.	40,000	
	(A) Thorpe	E.	20,000	
Gilby	(A) Consolidated	E.	45,000	
	(A) Monarch	E.	30,000	
	(A) Duluth Elevator Co	E.	25,000	
Johnstown	(A) Monarch	E.	20,000	

Station.	Owner.	Building.	Capacity.	Remarks.
Manitoba Division (in North Dakota)—Continued.				
			Bushels.	
Johnstown	(B) Wm. Stead	E.	20,000	
	(B) B. A. McDonald	E.	10,000	
Forest River	(A) Consolidated	E.	45,000	
	(A) Monarch	E.	15,000	
	(A) Thorpe	E.	20,000	
	(B) McHugh & Gardner	E.	30,000	
Voss	(A) Consolidated	E.	45,000	
	(A) Monarch	E.	20,000	
	(B) Thorpe	E.	25,000	
	(B-C) Farmers'. (One-half interest.)	E.	15,000	McHugh & Gardner.
Kellogg	(A) Great Western	E.	22,000	
Grafton	(A) Consolidated	E.	25,000	
	(A) Monarch	E.	15,000	
	(A) Thorpe	E.	20,000	
Cashel	(A) Consolidated	E.	40,000	
	(A) Monarch	E.	30,000	
	(A) Victoria	E.	40,000	
Elora	(A) Consolidated	E.	20,000	
	(A) Monarch	E.	35,000	
Drayton	(A) Consolidated	E.	25,000	
	(A) Monarch	E.	15,000	
	(A) Thorpe	E.	25,000	
	(A) Duluth Elevator Co	E.	30,000	
	(A) Victoria	E.	12,000	
	(B) Barton (R. M. Whittemore, lessee).	W.	2,000	
Pittsburg	(A) Consolidated	E.	25,000	
	(B) Morrison & Bellamy	E.	25,000	
	(B) J. H. Jamison	E.	7,000	
	(B) Thos. Stewart	E.	35,000	
Bowesmont	(A) Monarch	E.	20,000	
	(A) Duluth Elevator Co	E.	30,000	
	(B) B. A. McDonald & Co	E.	15,000	
Joliette	(A) Consolidated	E.	25,000	
	(A) Victoria	E.	15,000	
McArthur	(A) Monarch	E.	15,000	
	(B) Pembina Grain and Elevator Co.	W.	24,000	Headquarters, Pembina.
Pembina	(A) Monarch	E.	15,000	
	(B) Pembina Grain and Elevator Co.	W.	7,000	
	(A) Victoria	E.	15,000	
Dakota Division, (in North Dakota).				
Fargo	(B) Linseed Oil Mill	E.	80,000	Flax only.
	(B) Magill & Co	E.	30,000	
Canfield	(A) Consolidated	E.	20,000	
Mapleton	(A) Consolidated	E.	45,000	
	(A) Monarch	E.	25,000	
	(A) Great Western	E.	35,000	
	M. T. Dill	E.	30,000	Private.
Greene	Eli Greene	E.	14,000	Do.
Dalrymple	O. Dalrymple	2 E.	132,000	Do.
Casselton	(B) G. S. Walker	E.	55,000	
Wheatland	(A) Consolidated	E.	45,000	
	(A) Monarch	E.	30,000	
	(A) Great Western	E.	40,000	
Buffalo	(A) Monarch	E.	30,000	
	(A) Great Western	E.	40,000	
	(B) M. E. Hawk	E.	25,000	
	(B) B. A. Quirk	W.	10,000	Coarse grain.
Tower City	(A) Great Western	E.	35,000	
	(A) Consolidated	E.	25,000	
	(A) Monarch	E.	30,000	
Oriska	(A) Consolidated	E.	30,000	
	(A) Monarch	E.	15,000	
	(A) Great Western	E.	25,000	
Baird	(A) Johns & Powers	E.	25,000	
Valley City	(A) Monarch	E.	40,000	
	(B) Russell M. M. Co	M-E.	45,000	
	(A) Great Western	E.	20,000	
	(B) McPherson Port. Elevator	E.	2,000	
	(B) Farmers	E.	55,000	Lessees, Olsen & Cox.
Berea	(A) Johns & Powers	E.	25,000	
Hobart	(A) Cargill	E.	25,000	
Sanborn	(A) Consolidated	E.	30,000	
	(A) Cargill	E.	30,000	
	(B) Olsen & Cox	E.	22,000	Headquarters, Sanborn.
Eckelson	(A) Consolidated	E.	20,000	
	(A) Cargill	E.	30,000	

Station.	Owner.	Building.	Capacity.	Remarks.
Dakota Division, (in North Dakota—Continued.				
			Bushels.	
Jamestown	(A) Monarch	E.	35,000	
	(B) Smith & Helm	E.	10,000	
	(B) Russell M. M. Co	M-E.	75,000	
Eldridge	(A) Monarch	E.	25,000	
Tappen	(A) Monarch	E.	15,000	
Dawson	(A) Consolidated	E.	40,000	
	(B) Raymond & Kepler	W.	2,000	
Steele	(A) Great Western	E.	30,000	
	(A) Johns & Powers	E.	15,000	
McKenzie	(B) B. F. Scoville	E.	15,000	
Burleigh	(B) Bismarck Elevator Co	E.	12,000	Headquarters, Bismarck.
Bismarck	(B) Missouri Valley Milling Co.	E.	30,000	Headquarters, Mandan.
	(B) Bismarck Elevator Co	E.	12,000	
Fargo and Southwestern Branch (North Dakota).				
Cotters	(A) Consolidated	E.	18,000	
Horace	(A) Consolidated	E.	30,000	
	(A) Great Western	E.	33,000	
	(A) Monarch	E.	25,000	
Warren	(A) Monarch	E.	20,000	
	(A) Great Western	E.	33,000	
Davenport	(A) Consolidated	E.	25,000	
Woods	(A) Consolidated	E.	30,000	
	(A) Monarch	E.	20,000	
Leonard	(A) Monarch	E.	15,000	
	(A) Great Western	E.	30,000	
Coburn	(A) Monarch	E.	15,000	
Sheldon	(A) Monarch	E.	15,000	
	(A) Great Western	E.	30,000	
	(B) Southwestern	E.	30,000	
Buttzville	(A) Consolidated	E.	30,000	
	(B) B. H. Buttz	E.	50,000	
Lisbon	(A) Consolidated	E.	40,000	
	(A) Monarch	E.	25,000	
	(B) Great Western	E.	20,000	
	(B) Lisbon Elevator Co	E.	15,000	St. Bank, lessees.
Elliott	(A) Consolidated	E.	25,000	
	(A) Monarch	E.	15,000	
	(A) Great Western	E.	18,000	
Englevale	(A) Consolidated	E.	25,000	
	(A) Monarch	E.	25,000	
	(A) Great Western	E.	33,000	
Verona	(A) Consolidated	E.	25,000	
	(A) Monarch	E.	20,000	
La Moure	(A) Consolidated	E.	50,000	
	(A) Monarch	E.	25,000	
	(B) J. F. Downing	E.	40,000	
Berlin	(A) Consolidated	E.	25,000	
Edgeley	(A) Johns & Powers	E.	25,000	
Sanborn, Cooperstown, and T. M. Branch (North Dakota).				
Rogers	(A) Monarch	E.	15,000	
Dazey	(A) Cargill	E.	35,000	
	(A) Great Western	E.	33,000	
	(B) M. T. Rasmussen	E.	25,000	
Hannaford	(A) Carghill	E.	20,000	
	(B) Olsen & Cox	E.	20,000	Headquarters, Sanborn.
	(A) Monarch	E.	35,000	
Cooperstown	(A) Monarch	E.	25,000	
	(A) Great Western	E.	50,000	
	(A) Cargill	E.	50,000	
	(B) Dakota Elevator Co	E.	50,000	Headquarters, Fargo.
	(B) Olsen & Cox	E.	30,000	Headquarters, Sanborn.
	(B) R. C. Cooper	E.	50,000	
Lozell	(A) Great Western	E.	25,000	
Jesse	(A) Monarch	E.	20,000	
	(A) Great Western	E.	25,000	
	(B) Olsen & Cox	E.	25,000	Do.
Binford	(A) Monarch	E.	20,000	
	(A) Great Western	E.	25,000	
	(B) Burgess & B	W.	17,000	
McHenry	(A) Great Western	E.	25,000	
	(A) Monarch	E.	20,000	

Station.	Owner.	Building.	Capacity.	Remarks.
James River Valley Branch (North Dakota).			*Bushels.*	
Ypsilanti	(A) Consolidated	W.	20,000	
	(A) Monarch	W.	7,000	
Montpelier	(A) Consolidated	W.	20,000	
	(A) Monarch	W.	7,000	
Adrian	(A) Monarch	E.	20,000	
Dickey	(A) Consolidated	E.	13,000	
	(A) Monarch	E.	20,000	
	(A) Monarch	W.	20,000	
	(A) Johns & Powers	E.	35,000	
Grand Rapids	(A) Consolidated	W.	10,000	
	(A) Monarch	E.	20,000	
Glover	(A) Monarch	E.	25,000	
	(B) S. Glover	E.	20,000	
Oakes	(B) Perry & Jones	E.	30,000	
Jamestown and Northern Branch (North Dakota).				
Buchanan	(A) Monarch	E.	15,000	
Pingree	(A) Consolidated	E.	25,000	
Edmunds	(A) Consolidated	E.	40,000	
Melville	(A) Consolidated	E.	30,000	
	(B) D. Doughty	E.	20,000	
Carrington	(A) Consolidated	E.	25,000	
Sykeston	(A) Monarch	E.	30,000	
	(B) Miner & Cousins	E.	20,000	
Heaton	(A) Monarch	E.	20,000	
	(B) Miner & Cousins	E.	30,000	
Bowdon	(A) Monarch	E.	20,000	
	(A) Great Western	E.	25,000	
	(B) Eureka Elevator Co	E.	30,000	
Guptil	(A) Consolidated	E.	25,000	
Barlow	(A) Monarch	E.	20,000	
	(A) Johns & Powers	E.	20,000	
New Rockford	(A) Consolidated	E.	25,000	
	(A) Monarch	E.	25,000	
	(A) Great Western	E.	33,000	
	(B) Dakota Elevator Co	E.	40,000	Headquarters, Fargo.
Cheyenne	(A) Johns & Powers	E.	35,000	
	(A) Johns & Powers	E.	25,000	
	(A) Monarch	E.	25,000	
Oberon	(B) Dakota Elevator Co	E.	27,000	
	(A) Consolidated	E.	18,000	Do.
	(A) Monarch	E.	35,000	
	(A) Johns & Powers	E.	25,000	
Minnewaukan	(B) Schwedler Grain Co	W.	10,000	
	(A) Consolidated	E.	35,000	
	(A) Great Western	E.	25,000	
	(A) Monarch	E.	25,000	
	(B) Wm. Plummer & Co	E.	20,000	
Brimsmade	(A) Johns & Powers	E.	20,000	
	(A) Great Western	E.	33.000	
	(A) Monarch	E.	35,000	
Leeds	(A) Johns & Powers	E.	30,000	
	(B) T. E. Smith	E.	35,000	

Location of offices of line elevator companies, controlling elevators and warehouses in the Province of Manitoba: Winnipeg Elevator Company, Northern Elevator Company, Geo. Leary, W. L. Parish, Young Bros., Winnipeg.

Station.	Owner.	Building.	Capacity.	Remarks.
			Bushels.	
Emerson	(A) Northern	E.	75,000	
Lettellier	(A) Northern	E.	20,000	
	(A) Winnipeg	E.	25,000	
	(A) Geo. Leary	E.	12,000	
St. Jean	(A) Northern	E.	18,000	
	(A) Dominion	E.	20,000	Leary, lessee.
Hope Farm	(A) Northern	E.	20,000	
Morris	(A) Northern	E-W.	34,000	
	(B) G. T. Smith & Co.	W.	10,000	
Lowe Farm	(A) Winnipeg	E.	16,000	
	(B) G. T. Smith & Co.	Flax W.	2,000	
Myrtle	(A) Northern	E.	20,000	
	(A) Winnipeg	E.	18,000	
	(C) Farmers	E.	35,000	
Roland	(A) Northern	E.	30,000	
	(A) Winnipeg	E.	30,000	
	(A) Dominion	E.	30,000	
	(C) Farmers	E.	40,000	
Rosebank	(A) Northern	E.	30,000	
	(A) Winnipeg	E.	30,000	
	(C) Farmers	E.	35,000	
	(A) Dominion	E.	30,000	
Miami	(A) Northern	E.	30,000	
	(C) Farmers	E.	35,000	
	(A) Winnipeg	E.	30,000	
	(A) Dominion	E.	25,000	
Altamont	(A) Dominion	W.	6,000	Leary, lessee.
	(A) W. L. Parish	W.	5,000	
Somerset	(A) Northern	E.	8,000	
	(A) W. L. Parish	W.	13,000	
Swan Lake	(A) Northern	E.	10,000	
Mariecapolis	(C) Farmers	W.	5,000	
	(A) W. L. Parish	E.	10,000	
Greenway	(A) Northern	E.	30,000	
	(A) Dominion	E.	20,000	
Baldur	(A) Dominion	E.	40,000	
	(A) Winnipeg	E.	40,000	
	(A) Northern	E.	20,000	
Belmont	(A) Northern	E.	30,000	
	(A) Dominion	E.	30,000	
Ninette	(A) Winnipeg	E.	18,000	
Dunrea	(A) Young Bros.	E.	30,000	
	(A) Northern	E.	30,000	
Margaret	(A) Winnipeg	E.	18,000	
Minto	(A) Young Bros.	E.	30,000	
	(B) Jas. Johnson	E.	28,000	A. S. Banton, lessee.
Fairfax	(A) Winnipeg	E.	20,000	
Elgin	(A) Young Bros.	E.	30,000	
	(C) Farmers (Elgin Elevator Co.).	E.	40,000	
	(A) Winnipeg	E.	20,000	
Track End	(A) Winnipeg	E.	20,000	
Hilton	(A) Dominion	E.	35,000	Leary, lessee.
	(A) Winnipeg	E.	25,000	
	(A) Northern	E.	14,000	
Ashdown	(A) Northern	E.	20,000	
	(A) Winnipeg	E.	25,000	
Wawanesa	(A) Northern	E.	30,000	
	(B) Russell Snyder	E.	20,000	
	(A) Dominion	E.	30,000	Do.
Elliott	(A) Northern	E.	12,000	
Rounthwaite	(A) Northern	E.	30,000	
	(A) Dominion	E.	25,000	Do.
Martinville	(A) Northern	E.	15,000	
Brandon	(B) A. E. McKenzie	E.	40,000	
	(A) W. L. Parish	E.	18,000	
Silver Plains	(A) Dominion	E.	20,000	
Union Point	(A) Northern	E.	8,000	
Willow Range	(B) M. Blake	W.	4,000	
Underhill	(B) Baker & Reed	E.	30,000	Headquarters Winnipeg.
Oakville	(A) Dominion (burned May 17, 1900).	E.-W.	22,000	
	(A) Winnipeg	E.	20,000	
Oakland	(A) Winnipeg	E.	20,000	
St. Agathe	(A) Winnipeg	E.	16,000	
Yellowstone Division (North Dakota).				
Mandan	(B) Missouri Valley Milling Co.	M.-E.	125,000	

Location of offices of line elevator companies, controlling elevators and warehouses in the Province of Manitoba—Continued.

Station.	Owner.	Building.	Capacity.	Remarks.
Yellowstone Division (*North Dakota*)—Continued.				
			Bushels.	
New Salem	(A) Lyon Elevator Co	E.	18,000	Headquarters Mandan.
	(C) Farmers	W.	10,000	
	(B) A. F. Dietz	E.	10,000	
Sims	(B) C. L. Zimmerman	W.	1,000	
Glenulen	(A) Lyon Elevator Co	E.	20,000	Do.
Hebron	(B) H. Hoolst	W.	2,000	
	(B) F. Dicktenmuller	W.	2,000	
Antelope	(A) Lyon Elevator Co	W.	3,500	Do.
	(B) Koessel & Co	W.	12,000	
Richardton	(A) Lyon Elevator Co	E.	13,000	
Taylor	(A) Lyon Elevator Co	E.	20,000	Do.
	(A) Lyon Elevator Co	W.	6,000	Do.
Gladstone	(B) Lee & Lee	M.-W.	20,000	
Dickinson	(A) Lyon Elevator Co	E.	15,000	Do.
Montana and Rocky Mountain divisions (*in Montana*).				
Billings	(B) Babcock Hardware Co	M.-E.	25,000	
Big Timber	(B) Pioneer Milling Co	W.	2,000	
Livingston	(B) A. W. Miles	W.	20,000	
Bozeman	(B) Benepe-Owenhouse Co	E.	150,000	
	(C) Farmers and Merchants' Elevator Co.	E.	60,000	
	(B) Nelson, Storey & Co	M.-E.	100,000	
	(B) Bozeman Milling Co	M.-E.	100,000	
Belgrade	(B) Nelson, Storey & Co	E.	250,000	Headquarters Bozeman.
	(B) E. M. Ferris (Belgrade Elevator Co., lessees).	W.	10,000	
Manhattan	(B) Manhattan Malting Co	W.	250,000	Private.
	(B) R. B. Chrisholm	W.	3,000	
Helena	(B) T. C. Powers	W.		
Bonner	(B) Big Black Foot Milling Co.	M.-W.	25,000	
	(B) Big Black Foot Milling Co.	E.	60,000	
	(B) Big Black Foot Milling Co.	W.	3,000	
Stevensville	(B) Missoula Merc. Co	W.	500,000	Headquarters Missoula.
	(B) Amos Buck Merc. Co	W.	100,000	
	(B) Henry Buck & Co	W.	200,000	
Victor	(B) Missoula Merc. Co	W.	10,000	Do.
Hamilton	(B) Anaconda Copper Mining Co.	E.	75.000	Headquarters Anaconda.
	(B) Hamilton F. M. Co	M.-W.	30,000	
Plains	(B) J. A. McGowan	W.	5,000	
Frenchtown	(B) Marion Bros	W.	4,000	
Idaho Division (*in Washington*).				
Spokane	(A) Portland F. M. Co	W.	60,000	
	(B) Centennial M. Co	W.	40,000	
	(B) Brovendor & K	W.	40,000	
Marshall Junction	(B) Ameny Bros	E.	50,000	
Cheney	(B) Cummins Bros	M.-E.	40,000	
Tyler	(B) J. E. Carman	W.	5,000	
Sprague	(B) Gehres & Kertich	W.	25,000	
	(B) Sprague Flour Mills	W.	14,000	
	(B) Sprague Flour Mills	W.	14,000	
	(B) Sprague Flour Mills	W.	40,000	
	(B) Sprague Flour Mills	E.	50,000	
	(C) Farmers' Alliance	W.	40,000	
Harriston	(B) J. Smith	W.	7,000	
Iona	(B) D. Richardton	W.	10,000	
Ritzville	(A) Tacoma Grain Co	W.	40,000	
	(C) Farmers' Alliance	W.	20,000	
	(B) Clodius & Kalkway	W.	10,000	
	(B) Clodius & Kalkway	W.	40,000	
	(B) D. C. Banonett	W.	20,000	
	(B) N. H. Greene	W.	30,000	
	(B) Otto Bros	M-E.	35,000	
Lind	(B) Neilson Bros	W.	50,000	
	(B) H. Jansen	W.	20,000	
	(B) Bolneg & Labes	W.	70,000	
Prosser	(B) E. Kemp	W.	40,000	
Mabton	(B) S. P. Flower	W.	10,000	
	(B) Topp. Trading Co	W.	15,000	

Location of offices of line elevator companies, controlling elevators and warehouses in the Province of Manitoba, etc.—Continued.

Station.	Owner.	Building.	Capacity.	Remarks.
Idaho Division (in Washington) — Continued.				
			Bushels.	
Ellensburg	(B) Wm. Smithson & Co	W.	65,000	
	(B) Williams, Smithson Co	W.	40,000	
	(B) Williams, Smithson Co	W.	40,000	
	(B) Williams, Smithson Co	W.	30,000	
	(B) Ramsey Hardware Co	W.	35,000	
	(B) A. S. Klimberg	W.	50,000	
Central Washington Branch (in Washington).				
Medical Lake	(B) Eleo & Ganett	W.	10,000	
Reardon	(A) Tacoma Grain Co	W.	50,000	
	(B) Reardon Grain Co	W.	60,000	
	(B) W. H. Stiles	W.	30,000	
	(B) Washington Grain Milling Co.	W.	60,000	
Mondovi	(B) Washington Grain Milling Co.	W.	50,000	
	(B) D. M. Glasgow	W.	30,000	
	(A) Tacoma Grain Co	W.	50,000	
Davenport	(A) Tacoma Grain Co	W.	50,000	
	(B) Inkster Bros. & Co	W.	40,000	
	(B) D. M. Glasgow	W.	35,000	
	(B) S. McLain	W.	45,000	
	(B) Big Bend Milling Co	W.	50,000	
Omans	(B) D. M. Glasgow	W.	12,000	
Rocklyn	(B) Inkster Bros. & Co	W.	10,000	
	(A) Tacoma Grain Co	W.	15,000	
Creston	(B) F. L. Watson	W.	70,000	
	(B) H. M. Hansen	W.	40,000	
	(B) Geo. Simons	W.	30,000	
Wilbur	(A) Tacoma Grain Co	W.	65,000	
	(B) G. M. McAllister	W.	35,000	
	(B) M. E. Hay	W.	75,000	
	(B) J. M. Parish & Co	W.	35,000	
	(B) Columbia River Milling Co.	W.	40,000	
	(B) H. M. Hansen	W.	15,000	
Govan	(B) H. M. Hansen	W.	40,000	
	(B) H. Sheffield	W.	80,000	
	(B) Heinz & Kauffman	W.	36,000	
	(B) Jones & Frank	W.	20,000	
Almira	(B) J. C. Kallar	W.	100,000	
	(B) J. C. Johnson	W.	100,000	
	(B) La Follette Bros	W.	80,000	
	(B) F. Erwin	W.	30,000	
Hartline	(B) G. R. Roberts	W.	90,000	
	(B) McDaniel Bros	W.	80,000	
Coulee City	(B) McDaniel Bros	W.	40,000	
Spokane and Palouse Branch (Washington and Idaho).				
WASHINGTON.				
Spangle	(B) Gale & Parker	W.	15,000	
	(B) Lucus Bros	W.	80,000	
	(B) M. H. Sullivan	W.	45,000	
	(B) M. H. Sullivan	W.	18,000	
	(B) D. W. Gildea	W.	40,000	
	(A) Portland Flouring Mill Co.	W.	22,000	Private use.
Plaza	(A) Tacoma Grain Co	W.	30,000	
	(B) Marshall Field-Campbell & Rodgers.	W.	50,000	
	(B) Porter & Son	W.	20,000	
Rosalia	(B) J. A. Anderson	W.	120,000	
	(B) Wilmar & Dwyer	W.	20,000	
Oakesdale	(B) N. L. Strange	W.	40,000	
	(B) E. J. Doneen	W.	40,000	
	(B) Alexander & Davidson	W.	50,000	
	(A) Heistand-Warner W. H. Co.	W.	60,000	
	(B) E. M. Gillette	W.	30,000	
	(A) Western W. H. Co	W.	100,000	
	(A) Pacific Coast Elevator Co.	W.	100,000	
Rosalia	(C) Rosalia W. H. Co.	W.	100,000	Farmers' Alliance.
	(A) Tacoma Grain Co	W.	75,000	

Location of offices of line elevator companies, controlling elevators and warehouses in the Province of Manitoba—Continued.

Station.	Owner.	Building.	Capacity.	Remarks.
Spokane and Palouse Branch (Washington and Idaho)—Cont'd.				
WASHINGTON—continued.				
			Bushels.	
McCoys	(A) Tacoma Grain Co	W.	50,000	
	(A) Tacoma Grain Co	W,	50,000	
Kelleys	(B) E. J. Doneen	W.	40,000	
Belmont	(A) Heistand, Warner & Co	W.	35,000	
	(B) T. F. Rourke	W.	15,000	
	(A) Pacific Coast Elevator Co.	W.	35,000	
	(A) Tacoma Grain Co	W.	26,000	
Eden	(A) Tacoma Grain Co	W.	35,000	
	(C) Farmers' Alliance	W.	70,000	
	(C) Hayfield Bros	W.	45,000	
	(B) M. W. Belshaw	W.	20,000	
Garfield	(C) Farmers W. H. Co	W.	65,000	
	(B) Garfield Hardware Co	W.	60,000	
	(A) Tacoma Grain Co	W.	60,000	
Cedar Creek	(A) Tacoma Grain Co	W.	25,000	
Palouse	(A) Tacoma Grain Co	W.	75,000	
	(A) Heistand, Warner & Co	W.	60,000	
	(A) Heistand, Warner & Co	W.	60,000	
	(B) Wash. Water Power Co	W.	45,000	
	(B) J. A. Miller	W.	55,000	
	(B) J. A. Miller	W.	60,000	
	(B) Hyhsteck Bank of Spokane.	W.	5,000	
	(B) Gray & Gray	W.	40,000	
Fallon	(C) Farmers W. H. Co	W.	120,000	
	(A) Heistand, Warner & Co	W.	75,000	
	(A) Tacoma Grain Co	W.	60,000	
Whelan	(A) Tacoma Grain Co	W.	40,000	
	(B) W. H. Kyle	W.	40,000	
Pullman	(B) P. W. Lawrence	W.	135,000	
	(B) E. H. Letterman	W.	35,000	Closed.
	(A) Tacoma Grain Co	W.	60,000	
	(A) Heistand, Warner & Co	W.	90,000	Joint house.
Chambers	(B) C. W. Tracy	W.	60,000	Headquarters, Portland
	(B) P. W. Lawrence	W.	60,000	
	(B) Robinson & Glover	W.	50,000	
Staley	(B) Staley Bros	W.	35,000	
Sunshine	(B) P. W. Lawrence	W.	35,000	
Buzby Spur	(B) So. Palouse W. H. Co	W.	65,000	
Johnson	(B) Johnson Grain Storage, Forwarding and Commission Co.	W.	100,000	
	(A) Tacoma Grain Co	W.	75,000	
Colton	(A) Tacoma Grain Co	W.	85,000	
	(B) Wood & Miller	W.	110,000	
	(B) M. Schulyhers	W.	20,000	Private use.
Uniontown	(B) S. Hillard	W.	100,000	
	(B) Uniontown W. H. Co	W.	75,000	
	(A) Tacoma Grain Co	W.	110,000	
Leon	(A) Tacoma Grain Co	W.	85,000	
	(B) Uniontown W. H. Co	W.	70,000	
IDAHO.				
Genesee	(B) R. H. Russell	W.	40,000	
	(B) C. E. Wood	E.	80,000	
	(B) C. E. Wood, "A"	E.	50,000	
	(B) Driscoll & Thompson	W.	40,000	
	(B) C. E. Hibbs	W.	45,000	
	(B) First National Bank of Pullman.	W.	55,000	
	(A) Tacoma Grain Co	W.	50,000	
	(A) Heistand, Warner & Co	W.	45,000	
Moscow	(A) Tacoma Grain Co	W.	50,000	
	(B) First National Bank of Moscow.	W.	30,000	
	(A) M. J. S. Shields	W.	16,000	
	(B) Allen Howard	E.	50,000	
	(B) M. W. Grain Co	W.	70,000	
Joel	(B) W. H. Buchanan	W.	70,000	
	(A) Tacoma Grain Co	W.	50,000	
Vollmer	(A) Tacoma Grain Co	W.	20,000	
	(B) J. D. Jolly & Co	M-W.	60,000	
	(B) U. C. Rietman	W.	50,000	
Kendrick	(B) Alex. Hunter	W.	80,000	
	(B) Kendrick Grain Co	W.	70,000	
	(B) C. E. Wood	W.	85,000	

Location of offices of line elevator companies, controlling elevators and warehouses in the Province of Manitoba, etc.—Continued.

Station.	Owner.	Building.	Capacity.	Remarks.
Spokane and Palouse Branch (*Washington and Idaho*)—Continued.				
IDAHO—continued.			*Bushels.*	
Kendrick	(A) Heistand, Warner & Co.	W.	60,000	
Clyde	(A) Heistand, Warner & Co.	W.	20,000	
Juliaetta	(B) Inland Grain Co.	W.	150,000	
	(B) Juliaetta W. H. Co	W.	35,000	
Lewiston	(B) F. J. Boston	W.	50,000	
	(B) G. M. White (est.) (Pacific Coast Elevator Co., lessee).	W.	90,000	
North Lapwai	(B) C. E. Wood & Co.	W.	30,000	
	(B) East Washington Improvement Co.	W.	20,000	Closed.
	(A) Tacoma Grain Co.	W.	40,000	
Sweetwater	(B) West Washington Improvement Co.	W.	75,000	
Orofino	(B) Clearwater Improvement Co.	W.	40,000	
Lenore	(B) F. L. Farnsworth	W.	30,000	
	(B) C. W. Greene	W.	40,000	
Contact	(A) Heistand, Warner & Co.	W.	20,000	
	(B) Len McGill	W.	15,000	
	(B) J. B. Warner	W.	20,000	
Cul de Sac	(B) C. E. Wood	W.	40,000	
	(B) Palmerton & H.	W.	30,000	
Washington and Columbia River Rwy. Co. (*Washington and Oregon*).	[All buildings included below are warehouses.]			
WASHINGTON.				
Dayton	(A) Western W. H. Co.		100,000	
	(A) Washington and Columbia River Rwy. Co.		49,000	
	(A) Washington and Columbia River Rwy. Co.		38,000	
	(A) Washington and Columbia River Rwy. Co.		80,000	
	(A) Washington and Columbia River Rwy. Co.		35,000	
	(A) Washington and Columbia River Rwy. Co.		35,000	
	(A) Washington and Columbia River Rwy. Co.		70,000	
	(B) Corbett Bros.		70,000	
	(B) H. H. Wolf		35,000	
	(B) Roth & Co.		35,000	
	(A) Portland Flouring Mill Co.		100,000	
Longs	(A) Western W. H. Co.		55,000	
	(B) Gilbert Mills		21,000	
Richardson	(B) W. T. Richardson		24,000	
Huntsville	(A) Western W. H. Co.		55,000	
	(A) Washington and Columbia River Rwy. Co.		35,000	
	(B) Corbett Bros.		15,000	
Waitsburg	(A) Western W. H. Co.		40,000	
Coppel	(A) Western W. H. Co.		80,000	
	(C) Farmers W. H. Co.		80,000	
Summit	(A) Washington and Columbia River Rwy. Co.		50,000	
	(A) Washington and Columbia River Rwy. Co.		15,000	
Eastman	(A) Washington and Columbia River Rwy. Co.		49,000	
Dixie	(A) Washington and Columbia River Rwy. Co.		49,000	
	(A) Western W. H. Co.		40,000	
Gillian	(B) Gillian & Cornwell		35,000	
Spring Creek	(A) Western W. H Co.		55,000	
Aldrich	(A) Western W. H Co.		35,000	
	(A) Washington and Columbia River Rwy. Co.		49,000	
	(B) M. Aldrich		35,000	
Stanfield	(A) Washington and Columbia River Rwy. Co.		160,000	
Evans	(A) J. W. Harbert		10,000	
Walla Walla	(A) Western W. H. Co.		85,000	

Location of offices of line elevator companies, controlling elevators and warehouses in the Province of Manitoba, etc.—Continued.

Station.	Owner	Building.	Capacity.	Remarks.
Washington and Columbia River Rwy. Co. (Washington and Oregon)—Continued.				
WASHINGTON—continued.			*Bushels.*	
Walla Walla	(A) Western W. H. Co		35,000	
	(A) Washington and Columbia River Rwy. Co.		110,000	
	(A) Washington and Columbia River Rwy. Co.		28,000	
	(B) T. Yenney		38,000	
	(C) Farmers W. H. Co		115,000	
Collis	(A) Kershaw Grain Co		20,000	
Osborne	(A) Washington and Columbia River Rwy. Co.		51,000	
Dry Creek	(A) Washington and Columbia River Rwy. Co.		35,000	
	(A) Kershaw Grain Co		20,000	
Rulo	(A) Washington and Columbia River Rwy. Co.		49,000	
Climax	(B) Thorne		40,000	
Riverside	(B) Thorne		49,000	
Eureka	(C) Farmers W. H. Co		35,000	
	(B) A. J. Puffer		15,000	
Babcock	(B) W. H. Babcock		30,000	
Lee	(A) Kershaw Grain Co		40,000	
	(B) J. J. Hoffman and others		60,000	
Elwood	(B) J. M. Fall		35,000	
Clyde	(A) Kershaw Grain Co		40,000	
	(A) Kershaw Grain Co		52,000	
	(A) Kershaw Grain Co		49,000	
Pickards	(B) C. F. Pickard		45,000	
Pleasant View	(A) Kershaw Grain Co		40,000	
OREGON.				
Hillsdale	(A) Kershaw Grain Co		40,000	
Waterman	(A) Western W. H. Co	2 W.	55,000	
	(A) Kershaw Grain Co		40,000	
Athena	(A) Kershaw Grain Co		10,000	
	(A) Washington and Columbia River Rwy. Co.		180,000	
	(A) Western W. H. Co		35,000	
Canon	(A) Balfour, Guthrie & Co		30,000	
Vansycle	(A) Balfour, Guthrie & Co		10,000	
	(A) Balfour, Guthrie & Co		60,000	
	(A) Kershaw Grain Co		40,000	
	(A) Kershaw Grain Co		47,000	
Stanton	(A) Kershaw Grain Co		40,000	
	(A) Balfour, Guthrie & Co		60,000	
Helix	(A) Western W. H. Co	3 W.	106,000	
	(A) Western W. H. Co		20,000	
	(A) Balfour, Guthrie & Co	2 W.	50,000	
	(A) Balfour, Guthrie & Co		49,000	
	(A) Kershaw Grain Co		40,000	
	(A) Kershaw Grain Co		49,000	
	(B) Scott et al		49,000	
Warren	(A) Western W. H. Co		85,000	
	(A) Western W. H. Co		60,000	
	(A) Balfour, Guthrie & Co		45,000	
	(A) Balfour, Guthrie & Co		55,000	
	(A) Kershaw Grain Co		40,000	
	(A) Kershaw Grain Co		49,000	
Fulton	(A) Western W. H. Co		85,000	
	(A) Western W. H. Co	2 W.	60,000	
	(A) Balfour, Guthrie & Co		24,000	
	(A) Balfour, Guthrie & Co		26,000	
	(A) Kershaw Grain Co		40,000	
	(A) Kershaw Grain Co		49,000	
Pendleton	(A) Washington and Columbia River Rwy. Co.		17,000	
	(A) Washington and Columbia River Rwy. Co. (freight house).		17,000	

Location of offices of line companies controlling elevators and warehouses in Idaho, Washington, and Oregon: Tacoma Grain Company, Tacoma Warehouse and Elevator Company, Puget Sound Flouring Mill Company, Tacoma, Wash.; Portland Flouring Mills Company, Pacific Coast Elevator Company, Western Warehouse Compony, Balfour, Guthrie & Co., Allen & Lewis, Portland, Oreg.; Heistand, Warner & Co., San Francisco, Cal.

Elevator, warehouse, and mill facilities at lake, Twin City, and coast terminals.

Grain elevators at lake terminals (Duluth, West Superior, and Superior).

DULUTH.

Name.	Capacity.	Cleaners.	Reached by—	Operated by—
	Bushels.			
"B"	1,000,000	Yes	Northern Pacific Rwy	Consolidated Elevator Co.
"C"	1,250,000	No	do	Do.
"D"	1,200,000	Yes	do	Do.
"G"	1,650,000	No	do	Do.
"E"	1,300,000	Yes	All lines	Do.
"F"	1,450,000	No	do	Do.
"I"	1,650,000	No	do	Do.
"H"	1,250,000	Yes	do	Do.
"Peavey"	1,000,000	Yes	Northern Pacific and Eastern Minnesota.	Globe Elevator Co.
"Peavey"[1]	3,375,000			
"U.S. Milling Co."	1,000,000	Yes	Omaha and Eastern Minnesota.	U.S. Milling Co.

[1] Under construction.

WEST SUPERIOR.

"1"	600,000	Yes	Omaha Rwy	Globe Elevator Co.
"2"	1,850,000	No	do	Do.
"3"	1,900,000	Yes	do	Do.
"A"	550,000	Yes	Eastern Minnesota Rwy	Great Northern Elevator Co.
"X"	1,750,000	Yes	do	Do.
Constructing	3,000,000			Do.
Sharon Land Co	60,000	Yes	Eastern Minnesota Rwy	Armenia Land Co.
Hall	100,000	Yes	do	Hall Elevator Co.

SUPERIOR.

"M"	550,000	Yes	Northern Pacific Rwy	Belt Line Co.
"N"	1,600,000	No	do	Do.
"K"	750,000	Yes	do	Terminal Elevator Co.
"L"	1,750,000	No	do	Do.
Itaska	1,300,000	Yes	Omaha Rwy	Nye, Jenks & Co.

Mill and mill elevators at lake terminals (Duluth, West Superior, and Superior).

DULUTH.

Name.	Mill capacity.	Elevator capacity.	Reached by—	Operated by—
	Barrels.	*Bushels.*		
"Imperial"	8,000	650,000	Omaha and Eastern Minnesota.	U.S. Milling Co.

WEST SUPERIOR.

"Grand Republic"	2,500	250,000	L. S. T. Co	U.S. Milling Co.
"Minkota"	2,000	150,000	All lines	Do.
"Commander"	500		do	Do.
"Freeman"	3,000	150,000	do	Do.

SUPERIOR.

"Daisy"	3,000	300,000	Northern Pacific Rwy	U.S. Milling Co.
"Listman"	2,000	125,000	do	Do.
"Anchor"	2,000	250,000	do	Do.

Grain elevators at Twin City terminals.

MINNEAPOLIS DISTRICT.

Name.	Capacity.	Reached by—	Operated by—
	Bushels.		
Atlantic "A"	500,000	"Soo Line"	Atlantic Elevator Co.
"C"	1,000,000	C., M. and St. P	Empire Elevator Co.
Central	250,000	M. and St. L	Peavey Elevator Co.
Crescent	400,000	Northern Pacific	Crescent Elevator Co.
Great Eastern "H"	150,000	C., G. W. and G. N	Great Eastern Elevator Co.
Great Northern, No. 1	1,500,000	G. N. Rwy	Great Northern Rwy. Co.
Great Western, No. 1	550,000	M. and St. L	Great Western Elevator Co.
Interior, No. 2	250,000	M. and St. L	Interior Elevator Co.
Interior, No. 3	1,000,000	M. and St. L	Do.
Interstate, No. 1	700,000	C. G. W	Interstate Grain Co.
Interstate, No. 2	1,000,000	C. G. W	Do.
"K"	350,000	C., M. and St. P. Rwy	E. P. Bacon.
Midway, No. 1	570,000	G. N. Rwy	Midway Elevator Co.
Midway, No. 2	600,000	G. N. Rwy	Do.
Monarch	1,250,000	C., M. and St. P. Rwy	Monarch Elevator Co.
Northwestern, No. 1	900,000	G. N. Rwy	Northwestern Elevator Co.
Pillsbury	550,000	G. N. Rwy	C. A. Pillsbury & Co.
Shoreham	750,000	"Soo Line"	Osborne-McMillan Elevator Co.
Standard	500,000	C., G. W. Rwy	Standard Elevator Co.
Star	2,250,000	Omaha Rwy	Star Elevator Co.
Union	2,300,000	G. N. Rwy	Union Elevator Co.
Victoria	300,000	Northern Pacific	Victoria Elevator Co.
Woodworth	160,000	Omaha Rwy	E. S. Woodworth & Co.
"X"	600,000	C., M. and St. P. Rwy	Geo. C. Bagley Elevator Co.
Great Northern, No. 2	750,000	G. N. Rwy	Great Northern Rwy. Co.
Republic	1,750,000	Northern Pacific	Republic Elevator Co.
St. Anthony, No. 1	1,500,000	G. N. Rwy	St. Anthony Elevator Co.
Interior, No. 1	1,750,000	M. and St. L	Interior Elevator Co.
Great Western, No. 2	1,000,000	M. and St. L	Great Western Elevator Co.
Nortwestern, No. 2	100,000	G. N. Rwy	Northwestern Elevator Co.
St. Anthony, No. 2	300,000	G. N. Rwy	T. C. Metcalfe (superintendent St. Anthony Elevator Co.).
Elevator "B"	1,300,000	C., M. and St. P. Rwy	A. Caswell, manager.
City Elevator	130,000	M. and St. L	City Elevator Co.
Diamond Elevator	100,000	G. N. Rwy	Diamond Elevator and Milling Co.
Brooks-Griffith Co	125,000	St. P. and D	Brooks-Griffith Co.
Woodworth, No. 2	100,000	Omaha Rwy	E. S. Woodworth & Co.

All of the above elevators have cleaning facilities. Offices of different companies located in Minneapolis.

Mills and mill elevators at Twin City terminals.

MINNEAPOLIS DISTRICT.

Name.	Mill capacity per day.	Elevator capacity.	Reached by—	Operated by—
	Barrels.	*Bushels.*		
Pillsbury, A	12,400	80,000	G. N. Rwy	Pillsbury-Washburn Flour Mills Co.
Pillsbury, B	7,000	150,000	M. E. and M. W. Rwy	
Anchor	3,000		Railway Transfer Co	
Palisade	4,000		M. E. and M. W. Rwy	
A	3,600		Railway Transfer Co	Northwestern Consolidated Milling Co.
B	2,500		M. E. Rwy	
C	2,100	125,000	M. E. and M. W. Rwy	
D	2,300		do	
E	2,000		do	
F	2,100		M. E. Rwy	
G	1,450		Railway Transfer Co	
H	950		M. E. and M. W. Rwy	
Washburn, A	10,337	50,000	Railway Transfer Co. and M. W. Co.	The Washburn-Crosby Co.
Washburn, B	3,199		Railway Transfer Co	
Washburn, C	8,101	50,000	Railway Transfer and M. W. Co.	
Washburn, E	2,964		Railway Transfer Co	
Washburn, D	2,915		M. E. and M. W. Rwy	
Cataract	1,000		M. E. Rwy	Barber Milling Co.
Phoenix	600		G. N. Rwy	Phoenix Mill Co.
Dakota	600		Railway Transfer Co	National Milling Co.

All of the above elevators have cleaning facilities. Offices of different companies located in Minneapolis.

Grain warehouses at coast terminals (Portland, Tacoma, and Seattle).

PORTLAND.

Name.	Capacity.	Reached by—	Operated by—
	Bushels.		
Flanders No. 1	325,000	Northern Pacific Rwy	Portland Grain Co.
B. G. & Co	335,000	.....do	Balfour, Guthrie & Co.
Flanders No. 2	290,000	.....do	Girvin & Eyre.
Columbia No. 1	500,000	.....do	Allen & Lewis.

TACOMA.

Elevator, A	500,000	Northern Pacific Rwy	Tacoma Grain Co.
Elevator, B	700,000	.....do	Tacoma Warehouse and Elevator Co.

SEATTLE.

S. T. Rwy. & W. H. Co. El	660,000	Northern Pacific Rwy	Seattle Terminal Rwy. and Warehouse Co.

ALBINA (PORTLAND).

Columbia No. 2	500,000	Southern Pacific Rwy. or Oregon Rwy. and Navigation Co.	Allen & Lewis.
Victoria	400,000	.....do	Kerr, Gifford & Co.
Montgomery, Old	500,000	.....do	J. B. Montgomery.
Montgomery, New	670,000	.....do	Balfour, Guthrie & Co.
Irving	300,000	.....do	G. W. McNear.
Oceanic	600,000	.....do	Balfour, Guthrie & Co.
P. C. E. Co	300,000	.....do	Pacific Coast Elevator Co.
O. R. & N. Co	400,000	.....do	Oregon Rwy. and Navigation Co.

Mill and mill elevators at coast terminals.

TACOMA.

Name.	Mill capacity per day.	Elevator capacity.	Reached by—	Operated by—
	Barrels.	*Bushels.*		
Puget Sound Flouring Mill Co.	800	400,000	Northern Pacific Rwy	Puget Sound Flouring Mill Co.
Tacoma Flouring Mills	100	16,000	.....do	Watson & Olds.
Cascade Cereal Mills	200	30,000	.....do	Cascade Oatmill Co.

SEATTLE.

Novelty Mills	350	10,000	Seattle Terminal Rwy	Novelty Milling Co.
Centennial Mills	1,800	130,000	.....do	Centennial Mill Co.

ALBINA (PORTLAND).

Albina Mills	1,750	500,000	Oregon Railway and Navigation Co.	Portland Flouring Mill Co.

APPENDIX B.

DAILY CLOSING PRICES BID FOR FUTURE COTTON AT NEW YORK AND LIVERPOOL FOR SIX YEARS, 1894-99.

The following quotations have been prepared as a continuation of the quotations in the report of the Senate committee, No. 986, part 2, Fifty-third Congress, third session, known as the George report.

In the first column under each month is the date of the sale. The four columns of quotations which follow give the prices at which sales were made for future delivery. As for example, in 1894, January 2, the delivery price of cotton any time during January, at the option of the seller, was 7.74 at New York; for delivery any time during February, was 7.78; for delivery during March, 7.88; for delivery during April, 7.97. Contracts for future delivery are usually limited to the term of four months. The dates in these tables are all dates of sale; the months at the head of the columns of prices are months of future delivery. For each date there are four future quotations of prices at which delivery is contracted for during the month under which the price quoted occurs.

In the Liverpool quotations there is a slight difference. The months at the head of the columns of quotations are not single months, but dual months, as January-February, February-March, March-April, and April-May. On January 2, 1894, cotton for January-February delivery sold for 8.38; cotton for February-March delivery, for 8.44; for March-April delivery, at 8.50, and for April-May delivery, at 8.56. This means that the seller has the option of delivering his January sales any time within the months of January or February. Hence the January-February delivery of Liverpool corresponds to the February delivery in New York. In making comparisons between the quotations of the two markets this should be kept in mind.[1]

Daily (bid) closing prices of cotton "futures" in New ork.

[From the Commercial and Financial Chronicle.]

Dates of sale.	Prices and months of delivery.				Dates of sale.	Prices and months of delivery.				Dates of sale.	Prices and months of delivery.			
	Jan.	Feb.	Mar.	Apr.		Feb	Mar.	Apr.	May.		Mar.	Apr.	May.	June.
1894.					1894.					1894.				
Jan. 2	7.74	7.78	7.88	7.97	Feb. 1	7.79	7.84	7.91	7.98	Mar. 1	7.49	7.58	7.66	7.72
3	7.78	7.84	7.93	8.02	2	7.71	7.75	7.81	7.88	2	7.47	7.54	7.61	7.68
4	7.83	7.88	7.98	8.06	3	7.65	7.69	7.76	7.82	3	7.45	7.51	7.58	7.65
5	7.74	7.80	7.89	7.97	5	7.72	7.75	7.82	7.89	5	7.32	7.39	7.46	7.53
6	7.84	7.88	7.98	8.06	6	7.70	7.73	7.79	7.86	6	7.44	7.51	7.58	7.65
8	8.00	8.04	8.14	8.21	7	7.72	7.75	7.81	7.99	7	7.43	7.51	7.58	7.65
9	7.90	7.95	8.04	8.12	8	7.72	7.72	7.82	7.90	8	7.48	7.53	7.60	7.67
10	7.97	8.03	8.12	8.20	9	7.64	7.67	7.74	7.81	9	7.42	7.45	7.53	7.60
11	8.02	8.08	8.17	8.25	10	7.73	7.76	7.83	7.90	10	7.36	7.39	7.47	7.54
12	8.17	8.20	8.29	8.37	12	7.62	7.68	7.74	7.81	12	7.26	7.27	7.34	7.42
13	8.04	8.08	8.17	8.25	13	7.62	7.67	7.72	7.79	13	7.35	7.36	7.44	7.51
15	8.00	8.03	8.12	8.20	14	7.62	7.67	7.74	7.80	14	7.32	7.33	7.40	7.47
16	7.89	7.92	8.00	8.09	15	7.64	7.68	7.74	7.81	15	7.40	7.41	7.48	7.56
17	7.89	7.92	8.00	8.08	16	7.64	7.68	7.75	7.82	16	7.31	7.36	7.42	7.50
18	7.82	7.85	7.93	8.01	17	7.68	7.71	7.78	7.85	17	7.36	7.40	7.45	7,52
19	7.70	7.73	7.82	7.90	19	7.63	7.65	7.72	7.79	19	7.36	7.40	7.46	7.53
20	7.63	7.66	7.74	7.82	20	7.57	7.58	7.66	7.73	20	7.36	7.40	7.47	7.54
22	7.62	7.65	7.73	7.81	21	7.49	7.51	7.59	7.66	21	7.42	7.46	7.53	7.60
23	7.59	7.61	7.69	7.77	22	Holiday.				22	7.36	7.40	7.48	7.55
24	7.78	7.74	7.82	7.90	23	7.37	7.39	7.47	7.54	23	Holiday.			
25	7.74	7.75	7.83	7.92	24	7.28	7.29	7.36	7.44	24	Holiday.			
26	7.72	7.73	7.81	7.89	26	7.32	7.33	7.41	7.49	26	7.38	7.42	7.50	7.57
27	7.79	7.79	7.87	7.95	27	7.30	7.40	7.46	7.53	27	7.42	7.43	7.50	7.57
29	7.86	7.86	7.91	7.99	28	......	7.40	7.49	7.56	28	7.46	7.46	7.51	7.58
30	7.80	7.80	7.85	7.93						29	7.58	7.58	7.63	7.70
31	......	7.76	7.82	7.89						30	......	7.55	7.58	7.64
										31	......	7.60	7.63	7.70

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[1] The figures were compiled from sources mentioned by Mr. N. I. Stone, statistician of the Bureau of Economic Research, New York, N. Y.

Daily (bid) closing prices of cotton "futures" in New York—Continued.

Dates of sale.	Prices and months of delivery.			
	Apr.	May.	June.	July.
1894.				
Apr. 2	7.61	7.65	7.71	7.77
3	7.59	7.62	7.69	7.75
4	7.58	7.62	7.68	7.74
5	7.63	7.66	7.73	7.79
6	7.63	7.65	7.72	7.78
7	7.65	7.68	7.74	7.80
9	7.62	7.65	7.71	7.77
10	7.51	7.54	7.61	7.67
11	7.44	7.47	7.54	7.59
12	7.42	7.45	7.52	7.58
13	7.38	7.41	7.48	7.54
14	7.41	7.44	7.51	7.57
16	7.36	7.38	7.46	7.52
17	7.43	7.43	7.49	7.55
18	7.38	7.40	7.46	7.52
19	7.37	7.39	7.45	7.51
20	7.29	7.33	7.40	7.46
21	7.29	7.33	7.40	7.46
23	7.20	7.24	7.31	7.38
24	7.24	7.28	7.35	7.41
25	7.30	7.36	7.38	7.44
26	7.24	7.24	7.31	7.37
27	7.24	7.24	7.29	7.35
28	......	7.17	7.22	7.27
30	......	7.09	7.15	7.20

Dates of sale.	Prices and months of delivery.			
	May.	June.	July.	Aug.
1894.				
May 1	7.13	7.18	7.23	7.28
2	6.96	7.02	7.08	7.12
3	6.98	7.04	7.09	7.14
4	6.92	6.98	7.02	7.08
5	6.92	6.98	7.03	7.08
7	6.88	6.93	6.98	7.03
8	6.90	6.94	6.99	7.04
9	6.95	6.98	7.04	7.08
10	6.95	6.99	7.04	7.08
11	7.04	7.07	7.12	7.16
12	7.04	7.07	7.12	7.16
14	7.02	7.01	7.08	7.12
15	6.97	6.99	7.04	7.08
16	6.94	6.96	7.01	7.05
17	6.87	6.89	6.94	6.97
18	6.86	6.88	6.93	6.97
19	6.90	6.93	6.98	7.02
21	6.91	6.91	6.97	7.01
22	6.91	6.92	6.97	7.01
23	6.95	7.00	7.06	7.10
24	6.88	6.93	7.00	7.04
25	6.96	6.98	7.04	7.08
26	6.94	6.96	7.02	7.06
28	6.94	6.96	7.01	7.05
29	......	7.04	7.08	6.13
30	Holiday.			
31	......	7.16	7.19	7.24

Dates of sale.	Prices and months of delivery.			
	June.	July.	Aug.	Sept.
1894.				
June 1	7.18	7.23	7.27	7.29
2	7.15	7.19	7.23	7.25
4	7.06	7.09	7.14	7.15
5	7.15	7.18	7.22	7.24
6	7.21	7.23	7.27	7.30
7	7.23	7.25	7.29	7.31
8	7.16	7.18	7.22	7.24
9	7.06	7.08	7.13	7.15
11	7.10	7.12	7.17	7.19
12	7.12	7.14	7.18	7.20
13	7.14	7.16	7.20	7.23
14	7.16	7.18	7.22	7.25
15	7.13	7.15	7.18	7.20
16	7.10	7.12	7.16	7.18
18	7.08	7.09	7.13	7.14
19	7.09	7.10	7.14	7.16
20	7.12	7.13	7.17	7.18
21	7.09	7.11	7.15	7.16
22	7.09	7.10	7.14	7.15
23	7.08	7.09	7.14	7.14
25	7.06	7.07	7.13	7.14
26	7.01	7.02	7.08	7.09
27	7.01	7.03	7.09	7.10
28	......	7.00	7.05	7.06
29	......	7.00	7.05	7.06
30	......	6.99	7.04	7.05

Dates of sale.	Prices and months of delivery.			
	July.	Aug.	Sept.	Oct.
1894.				
July 2	6.98	7.03	7.05	7.11
3	7.06	7.11	7.12	7.19
4	Holiday.			
5	6.98	7.03	7.05	7.11
6	6.99	7.03	7.05	7.12
7	6.94	6.98	6.99	7.05
9	6.90	6.94	6.95	7.01
10	6.90	6.94	6.96	7.02
11	6.94	6.97	6.99	7.06
12	6.95	6.98	7.01	7.07
13	6.89	6.92	6.95	7.02
14	6.87	6.90	6.94	7.01
16	6.87	6.90	6.94	7.01
17	6.91	6.94	6.99	7.05
18	6.87	6.91	6.95	7.02
19	6.84	6.88	6.93	7.00
20	6.82	6.86	6.91	6.98
21	6.80	6.84	6.88	6.95
23	6.72	6.75	6.80	6.87
24	6.65	6.68	6.73	6.81
25	6.72	6.75	6.81	6.89
26	6.65	6.69	6.73	6.81
27	6.70	6.72	6.75	6.83
28	6.65	6.67	6.70	6.78
30	......	6.57	6.62	6.69
31	......	6.57	6.62	6.69

Dates of sale.	Prices and months of delivery.			
	Aug.	Sept.	Oct.	Nov.
1894.				
Aug. 1	6,51	6.56	6.64	6.72
2	6.48	6.55	6.63	6.72
3	6.55	6.60	6.68	6.77
4	6.63	6.68	6.76	6.85
6	6.61	6.65	6.73	6.82
7	6.54	6.58	6.66	6.75
8	6.61	6.65	6.73	6.81
9	6.67	6.70	6.77	6.85
10	6.81	6.64	6.69	6.77
11	6.61	6.65	6.70	6.78
13	6.70	6.75	6.80	6.87
14	6.75	6.77	6.82	6.89
15	6.66	6.70	6.75	6.82
16	6.63	6.66	6.71	6.78
17	6.67	6.70	6.75	6.82
18	6.65	6.68	6.73	6.80
20	6.58	6.62	6.68	6.75
21	6.56	6.60	6.67	6.73
22	6.57	6.61	6.67	6.74
23	6.60	6.64	6.70	6.77
24	6.63	6.67	6.73	6.79
25	6.65	6.67	6.73	6.80
27	6.57	6.60	6.66	6.73
28	6.55	6.57	6.63	6.69
29	6.54	6.56	6.61	6.66
30	......	6.61	6,65	6.70
31	......	6.59	6.63	6.69

Dates of sale.	Prices and months of delivery.			
	Sept.	Oct.	Nov.	Dec.
1894.				
Sept. 1	Holiday.			
3	Holiday.			
4	6.65	6.69	6.75	6.81
5	6.75	6.76	6.82	6.88
6	6.68	6.71	6.77	6.83
7	6.63	6.66	6.72	6.78
8	6.67	6.71	6.76	6.82
10	6.62	6.64	6.70	6.76
11	6.60	6.61	6.67	6.73
12	6.61	6.62	6.68	6.74
13	6.66	6.66	6.72	6.78
14	6.63	6.62	6.68	6.75
15	6.59	6.57	6.63	6.69
17	6.50	6.47	6.52	6.57
18	6.47	6.44	6.48	6.52
19	6.41	6.39	6.43	6.48
20	6.28	6.28	6.33	6.39
21	6.22	6.22	6.27	6.32
22	6.23	6.22	6.27	6.33
24	6.20	6.20	6.25	6.32
25	6.18	6.16	6.23	6.29
26	6.04	6.03	6.09	6.16
27	......	6.13	6.18	6.24
28	......	6.04	6.07	6.13
29	......	5.95	6.03	6,08

Daily (bid) closing prices of cotton "futures" in New York—Continued.

Dates of sale.	Prices and months of delivery.			
	Oct.	Nov.	Dec.	Jan.
1894.				
Oct. 1	5.82	5.84	5.90	5.96
2	5.96	5.99	6.05	6.11
3	5.92	5.94	5.99	6.05
4	6.03	6.07	6.12	6.18
5	6.07	6.11	6.16	6.23
6	5.90	5.95	6.01	6.07
8	5.88	5.92	5.99	6.05
9	5.89	5.92	5.99	6.05
10	5.82	5.85	5.92	5.99
11	5.75	5.79	5.85	5.91
12	5.62	5.66	5.72	5.78
13	5.69	5.73	5.79	5.85
15	5.62	5.66	5.72	5.78
16	5.63	5.67	5.73	5.79
17	5.61	5.64	5.71	5.76
18	5.53	5.56	5.63	5.69
19	5.51	5.55	5.61	5.66
20	5.44	5.48	5.53	5.59
22	5.47	5.51	5.57	5.62
23	5.53	5.57	5.62	5.68
24	5.48	5.50	5.55	5.60
25	5.50	5.51	5.56	5.61
26	5.53	5.54	5.57	5.62
27	5.48	5.49	5.52	5.57
29	5.51	5.52	5.55	5.60
30	......	5.53	5.54	5.59
31	......	5.49	5.50	5.55

Dates of sale.	Prices and months of delivery.			
	Nov.	Dec.	Jan.	Feb.
1894				
Nov. 1	5.52	5.53	5.57	5.63
2	5.52	5.54	5.59	5.64
3	5.53	5.56	5.60	5.65
5	5.51	5.53	5.57	5.63
6	Holiday.			
7	5.44	5.46	5.51	5.56
8	5.35	5.37	5.41	5.46
9	5.34	5.36	5.41	5.46
10	5.31	5.32	5.37	5.42
12	5.24	5.25	5.30	5.35
13	5.25	5.26	5.32	5.37
14	5.44	5.46	5.52	5.58
15	5.33	5.35	5.40	5.46
16	5.26	5.30	5.36	5.42
17	5.28	5.32	5.38	5.44
19	5.38	5.41	5.48	5.54
20	5.42	5.47	5.54	5.60
21	5.51	5.57	5.64	5.69
22	5.44	5.48	5.55	5.61
23	5.57	5.60	5.68	5.73
24	5.71	5.74	5.82	5.87
26	5.75	5.78	5.86	5.91
27	5.71	5.74	5.82	5.88
28	5.60	5.62	5.69	5.75
29	Holiday.			
30	......	5.48	5.54	5.00

Dates of sale.	Prices and months of delivery.			
	Dec.	Jan.	Feb.	Mar.
1894.				
Dec. 1	5.47	5.53	5.58	5.64
3	5.55	5.63	5.69	5.74
4	5.46	5.54	5.58	5.63
5	5.54	5.62	5.66	5.71
6	5.61	5.68	5.71	5.75
7	5.57	5.62	5.63	5.68
8	5.58	5.63	5.64	5.69
10	5.51	5.56	5.58	5.62
11	5.52	5.58	5.60	5.65
12	5.49	5.56	5.58	5.63
13	5.48	5.53	5.55	5.60
14	5.54	5.57	5.59	5.64
15	5.52	5.55	5.58	5.63
17	5.46	5.49	5.52	5.57
18	5.45	5.49	5.52	5.57
19	5.45	5.51	5.55	5.60
20	5.46	5.49	5.53	5.58
21	5.40	5.42	5.45	5.50
22	5.41	5.43	5.47	5.51
24	Holiday.			
25	Holiday.			
26	5.44	5.46	5.50	5.54
27	5.49	5.51	5.55	5.59
28	......	5.52	5.56	5.60
29	......	5.55	5.58	5.62
31	Holiday.			

Dates of sale.	Prices and months of delivery.			
	Jan.	Feb.	Mar.	Apr.
1895.				
Jan. 2	5.48	5.50	5.53	5.58
3	5.46	5.47	5.51	5.56
4	5.49	5.50	5.55	5.60
5	5.53	5.52	5.58	5.62
7	5.49	5.49	5.53	5.58
8	5.53	5.53	5.57	5.62
9	5.58	5.58	5.63	5.67
10	5.55	5.54	5.58	5.63
11	5.55	5.55	5.59	5.63
12	5.54	5.54	5.58	5.62
14	5.55	5.55	5.59	5.63
15	5.55	5.54	5.58	5.61
16	5.55	5.55	5.59	5.62
17	5.58	5.57	5.61	5.64
18	5.56	5.56	5.60	5.63
19	5.53	5.52	5.57	5.60
21	5.48	5.47	5.52	5.55
22	5.45	5.44	5.49	5.52
23	5.39	5.42	5.47	5.50
24	5.44	5.45	5.50	5.53
25	5.42	5.43	5.48	5.51
26	5.44	5.45	5.49	5.52
28	5.39	5.40	5.44	5.47
29	5.45	5.45	5.49	5.53
30	5.42	5.43	5.47	5.51
31	......	5.40	5.50	5.54

Dates of sale.	Prices and months of delivery.			
	Feb.	Mar.	Apr.	May.
1895.				
Feb. 1	5.41	5.45	5.49	5.53
2	5.41	5.45	5.49	5.53
4	5.37	5.41	5.44	5.49
5	5.35	5.39	5.42	5.46
6	5.37	5.43	5.46	5.50
7	5.44	5.49	5.52	5.57
8	5.42	5.48	5.51	5.56
9	5.43	5.49	5.52	5.57
11	5.41	5.46	5.50	5.55
12	5.40	5.44	5.47	5.52
13	5.41	5.46	5.49	5.54
14	5.44	5.48	5.51	5.56
15	5.43	5.45	5.49	5.54
16	5.45	5.48	5.52	5.57
18	5.47	5.49	5.52	5.57
19	5.48	5.51	5.53	5.58
20	5.47	5.49	5.51	5.55
21	5.45	5.47	5.49	5.53
22	Holiday.			
23	5.47	5.48	5.49	5.53
25	5.39	5.52	5.43	5.47
26	5.39	5.42	5.43	5.47
27	......	5.41	5.42	5.46
28	......	5.43	5.44	5.48

Dates of sale.	Prices and months of delivery.			
	Mar.	Apr.	May.	June.
1895.				
Mar. 1	5.45	5.45	5.49	5.51
2	5.51	5.51	5.55	5.57
4	5.51	5.51	5.55	5.57
5	5.49	5.49	5.53	5.56
6	5.57	5.57	5.61	5.63
7	5.65	5.64	5.69	5.72
8	5.66	5.66	5.70	5.71
9	5.80	5.81	5.84	5.84
11	5.72	5.72	5.75	5.75
12	5.86	5.86	5.90	5.90
13	5.82	5.82	5.86	5.84
14	5.89	5.89	5.93	5.90
15	5.97	5.96	5.99	5.97
16	6.10	6.09	6.11	6.12
18	5.97	5.98	6.02	6.01
19	6.15	6.15	6.19	6.18
20	6.27	6.27	6.31	6.28
21	6.20	6.20	6.24	6.22
22	6.08	6.08	6.13	6.10
23	6.10	6.10	6.15	6.13
25	6.18	6.18	6.23	6.20
26	6.11	6.12	6.17	6.14
27	6.19	6.19	6.23	6.21
28	......	6.21	6.25	6.22
29	......	6.21	6.24	6.21
30	......	6.26	6.30	6.28

Daily (bid) closing prices of cotton "futures" in New York—Continued.

Dates of sale.	Prices and months of delivery.			
	Apr.	May.	June.	July.
1895.				
Apr. 1	6.25	6.27	6.27	6.28
2	6.26	6.29	6.28	6.29
3	6.26	6.29	6.28	6.29
4	6.20	6.24	6.23	6.24
5	6.22	6.26	6.25	6.26
6	6.26	6.28	6.27	6.28
8	6.28	6.31	6.29	6.31
9	6.32	6.34	6.34	6.36
10	6.43	6.45	6.43	6.46
11	6.48	6.50	6.46	6.49
12	Holiday.			
13	Holiday.			
15	6.71	6.73	6.68	6.70
16	6.68	6.70	6.65	6.69
17	6.80	6.80	6.77	6.81
18	6.71	6.72	6.67	6.72
19	6.79	6.80	6.74	6.79
20	6.85	6.86	6.78	6.82
22	6.81	6.83	6.73	6.78
23	6.87	6.89	6.79	6.83
24	6.81	6.82	6.73	6.77
25	6.72	6.75	6.68	6.72
26	6.83	6.85	6.76	6.80
27	6.86	6.87	6.79	6.84
29	......	6.86	6.78	6.82
30	......	6.74	6.66	6.70

Dates of sale.	Prices and months of delivery.			
	May.	June.	July.	Aug.
1895.				
May 1	6.64	6.56	6.61	6.65
2	6.73	6.64	6.69	6.74
3	6.72	6.63	6.68	6.73
4	6.63	6.56	6.61	6.66
6	6.63	6.55	6.60	6.65
7	6.60	6.51	6.56	6.62
8	6.61	6.52	6.58	6.63
9	6.68	6.61	6.67	6.72
10	6.57	6.51	6.56	6.61
11	6.62	6.55	6.60	6.55
13	6.58	6.52	6.57	6.62
14	6.62	6.57	6.62	6.87
15	6.57	6.55	6.60	6.65
16	6.66	6.63	6.69	6.74
17	6.81	6.79	6.84	6.89
18	6.86	6.84	6.91	6.95
20	6.96	6.94	6.99	7.05
21	6.95	6.93	6.99	7.05
22	7.12	7.10	7.16	7.22
23	7.07	7.05	7.10	7.16
24	7.07	7.04	7.10	7.16
25	7.14	7.12	7.18	7.24
27	7.08	7.10	7.13	7.18
28	7.09	7.06	7.13	7.18
29	......	7.13	7.20	7.24
30	Holiday.			
31	......	7.09	7.14	7.17

Dates of sale.	Prices and months of delivery.			
	June.	July.	Aug.	Sept.
1895.				
June 1	7.00	7.05	7.08	7.10
3	7.03	7.06	7.10	7.12
4	7.09	7.11	7.14	7.17
5	6.98	7.01	7.05	7.07
6	7.08	7.10	7.14	7.17
7	7.11	7.14	7.17	7.28
8	7.14	7.15	7.19	7.22
10	7.17	7.17	7.21	7.24
11	7.14	7.16	7.20	7.23
12	7.08	7.10	7.13	7.17
13	7.02	7.05	7.08	7.12
14	6.96	6.99	7.02	7.06
15	6.95	6.98	7.01	7.04
17	6.90	6.93	6.96	6.99
18	6.80	6.81	6.84	6.87
19	6.86	6.87	6.91	6.95
20	6.81	6.82	6.86	6.89
21	6.85	6.85	6.90	6.94
22	6.84	6.84	6.88	6.92
24	6.69	6.69	6.73	6.77
25	6.68	6.67	6.72	6.77
26	6.80	6.79	6.84	6.88
27	6.73	6.74	6.75	6.79
28	......	6.75	6.78	6.82
29	......	6.80	6.83	6.87

Dates of sale.	Prices and months of delivery.			
	July.	Aug.	Sept.	Oct.
1895.				
July 1	6.92	6.95	7.00	7.05
2	6.94	6.96	7.01	7.06
3	6.92	6.94	6.99	7.04
4	Holiday.			
5	6.85	6.87	6.92	6.97
6	6.89	6.91	6.96	7.01
8	6.97	6.98	7.03	7.08
9	6.87	6.88	6.93	6.98
10	6.77	6.78	6.82	6.87
11	6.87	6.88	6.93	6.98
12	6.80	6.81	6.86	6.91
13	6.79	6.80	6.85	6.90
15	6.76	6.76	6.81	6.86
16	6.78	6.78	6.83	6.88
17	6.81	6.82	6.87	6.92
18	6.75	6.75	6.80	6.85
19	6.78	6.78	6.84	6.89
20	6.76	6.76	6.81	6.81
22	6.78	6.78	6.84	6.89
23	6.77	6.77	6.83	6.88
24	6.76	6.76	6.83	6.88
25	6.73	6.72	6.78	6.84
26	6.79	6.79	6.83	6.89
27	6.77	6.77	6.81	6.81
29	6.75	6.75	6.78	6.83
30	6.75	6.75	6.78	6.83
31	......	6.81	6.85	6.90

Dates of sale.	Prices and months of delivery.			
	Aug.	Sept.	Oct.	Nov.
1895.				
Aug. 1	6.94	6.98	7.02	7.06
2	6.87	6.90	6.94	6.98
3	6.94	6.97	7.01	7.05
5	6.98	7.01	7.05	7.09
6	6.99	7.01	7.06	7.10
7	6.98	7.00	7.05	7.09
8	7.01	7.03	7.08	7.09
9	7.03	7.04	7.08	7.11
10	7.19	7.20	7.25	7.29
12	7.34	7.35	7.39	7.43
13	7.25	7.25	7.30	7.35
14	7.28	7.28	7.34	7.34
15	7.27	7.27	7.32	7.36
16	7.20	7.20	7.24	7.29
17	7.27	7.27	7.33	7.38
19	7.27	7.27	7.33	7.37
20	7.30	7.30	7.36	7.41
21	7.42	7.42	7.48	7.53
22	7.40	7.40	7.47	7.52
23	7.52	7.53	7.61	7.67
24	7.62	7.63	7.70	7.76
26	7.60	6.60	7.67	7.73
27	7.71	7.71	7.78	7.84
28	7.82	7.80	7.88	7.92
29	7.95	7.96	8.04	8.09
30	......	7.89	7.96	8.02
31	......	7.74	7.80	7.86

Dates of sale.	Prices and months of delivery.			
	Sept.	Oct.	Nov.	Dec.
1895.				
Sept. 2	Holiday.			
3	7.97	8.04	8.10	8.17
4	7.87	7.93	7.99	8.06
5	7.80	7.85	7.91	7.98
6	7.85	7.90	7.96	8.0
7	7,93	7.98	8.04	8.10
9	8.05	8.09	8.16	8.23
10	8.11	8.14	8.21	8.28
11	7.99	8.03	8.10	8.17
12	7.85	7.88	7.96	8.03
13	7.94	7.97	8.04	8.12
14	7.87	7.90	7.96	8.04
16	7.81	7.83	7.90	7.97
17	7.92	7.93	8.00	8.08
18	7,86	7.88	7.95	8.03
19	8.03	8.04	8.10	8.18
20	8.03	8.03	8.09	8.14
21	8.01	8.02	8.10	8.17
23	8.19	8.18	8.25	8.32
24	8.23	8.24	8.31	8.39
25	8.34	8.35	8.42	8.50
26	8.50	8.52	8.59	8.67
27	8.65	8.64	8.70	8.77
28	......	8.64	8.69	8.76
30	......	8.88	8.91	8.99

Daily (bid) closing prices of cotton "futures" in New York—Continued.

Dates of sale.	Prices and months of delivery.			
	Oct.	Nov.	Dec.	Jan.
1895.				
Oct. 1	8.71	8.75	8.82	8.89
2	8.68	8.71	8.79	8.86
3	8.92	8.96	9.04	9.11
4	8.86	8.88	8.96	9.04
5	8.84	8.86	8.94	9.02
7	8.80	8.81	8.89	8.97
8	8.78	8.80	8.87	8.95
9	8.95	8.97	9.05	9.13
10	8.77	8.80	8.88	8.96
11	8.80	8.81	8.98	8.98
12	8.85	8.86	8.94	9.02
14	9.00	8.99	9.08	9.16
15	9.21	9.20	9.29	9.37
16	9.10	9.10	9.18	9.25
17	9.14	9.14	9.20	9.27
18	8.97	8.97	9.04	9.11
19	8.73	8.73	8.80	8.86
21	8.20	8.20	8.22	8.30
22	8.47	8.47	8.53	8.59
23	8.17	8.17	8.25	8.31
24	8.18	8.18	8.26	8.32
25	8.43	8.43	8.49	8.57
26	8.38	8.38	8.43	8.50
28	8.51	8.52	8.57	8.64
29	8.65	8.64	8.70	8.77
30	8.77	8.77	8.83	8.89
31	......	8.76	8.81	8.87

Dates of sale.	Prices and months of delivery.			
	Nov.	Dec.	Jan.	Feb.
1895.				
Nov. 1	8.67	8.73	8.80	8.85
2	8.61	8.65	8.72	8.77
4	8.67	8.70	8.76	8.80
5	Holiday.			
6	8.52	8.55	8.61	8.66
7	8.59	8.62	8.68	8.73
8	8.47	8.49	8.65	8.59
9	8.39	8.41	8.47	8.52
11	8.28	8.30	8.36	8.40
12	8.33	8.34	8.39	8.44
13	8.23	8.24	8.29	8.34
14	8.20	8.21	8.26	8.31
15	8.01	8.02	8.07	8.13
16	8.10	8.11	8.16	8.20
18	8.12	8.12	8.16	8.21
19	8.08	8.08	8.12	8.17
20	8.12	8.11	8.15	8.20
21	8.21	8.21	8.25	8.30
22	8.21	8.22	8.25	8.30
23	8.33	8.33	8.37	8.42
25	8.44	8.44	8.48	8.53
26	8.38	8.39	8.43	8.48
27	8.45	8.43	8.49	8.54
28	Holiday.			
29	......	8.35	8.39	8.44
30	......	8.26	8.29	8.34

Dates of sale.	Prices and months of delivery.			
	Dec.	Jan.	Feb.	Mar.
1895.				
Dec. 2	8.20	8.23	8.29	8.34
3	8.11	8.15	8.20	8.25
4	8.13	8.17	8.23	8.28
5	8.03	8.05	8.10	8.16
6	8.12	8.14	8.19	8.24
7	8.13	8.15	8.20	8.26
9	8.23	8.25	8.30	8.35
10	8.35	8.37	8.42	8.47
11	8.20	8.22	8.27	8.32
12	8.26	8.28	8.34	8.39
13	8.24	8.26	8.31	8.37
14	8.27	8.27	8.33	8.38
16	8.22	8.23	8.23	8.33
17	8.24	8.24	8.30	8.35
18	8.18	8.19	8.24	8.29
19	8.08	8.08	8.13	8.18
20	7.98	7.99	8.05	8.11
21	7.85	7.85	7.91	7.97
23	7.90	7.90	7.97	8.04
24	7.86	7.88	7.95	8.02
25	Holiday.			
26	7.77	7.78	7.86	7.94
27	7.78	7.79	7.88	7.94
28	7.80	7.81	7.90	7.96
30	......	7.89	7.96	8.04
31	......	8.03	8.13	8.21

Dates of sale.	Prices and months of delivery.			
	Jan.	Feb.	Mar.	Apr.
1896.				
Jan. 2	7.98	8.10	8.18	8.23
3	7.98	8.03	8.10	8.15
4	7.91	7.96	8.04	8.10
6	7.89	7.93	8.01	8.06
7	7.80	7.83	7.91	7.96
8	7.90	7.95	8.03	8.06
9	7.85	7.91	7.97	8.03
10	7.96	7.99	8.06	8.11
11	7.95	7.98	8.04	8.09
13	7.88	7.93	7.99	8.04
14	7.87	7.89	7.95	8.00
15	7.80	7.81	7.88	7.92
16	7.86	7.88	7.94	7.98
17	7.81	7.82	7.89	7.93
18	7.83	7.83	7.90	7.94
20	7.88	7.88	7.95	7.99
21	7.98	7.98	8.05	8.08
22	7.92	7.92	7.99	8.03
23	8.02	8.02	8.09	8.12
24	8.00	8.00	8.06	8.10
25	7.99	7.99	8.05	8.09
27	7.90	7.90	7.96	8.00
28	7.93	7.93	7.99	8.04
29	7.92	7.91	7.98	8.02
30	7.98	7.98	8.03	8.07
31	......	7.95	7.99	8.03

Dates of sale.	Prices and months of delivery.			
	Feb.	Mar.	Apr.	May.
1896.				
Feb. 1	7.94	7.98	8.03	8.07
3	7.92	7.96	8.00	8.04
4	7.86	7.97	8.03	8.07
5	7.88	8.01	8.06	8.10
6	7.83	7.95	8.00	8.04
7	7.83	7.95	8.01	8.05
8	7.82	7.95	7.99	8.04
10	7.85	7.87	7.91	7.96
11	7.79	7.84	7.89	7.93
12	Holiday.			
13	7.70	7.76	7.82	7.86
14	7.70	7.74	7.79	7.83
15	7.61	7.63	7.68	7.72
17	7.50	7.51	7.56	7.61
18	7.53	7.55	7.59	7.64
19	7.56	7.57	7.61	7.66
20	7.66	7.68	7.72	7.76
21	7.58	7.59	7.65	7.68
22	Holiday.			
24	7.55	7.55	7.61	7.66
25	7.57	7.57	7.63	7.68
26	7.62	7.63	7.68	7.72
27	7.47	7.48	7.54	7.58
28	7.43	7.44	7.49	7.54
29	......	7.44	7.51	7.55

Dates of sale.	Prices and months of delivery.			
	Mar.	Apr.	May.	June.
1896.				
Mar. 2	7.29	7.36	7.41	7.44
3	7.32	7.39	7.43	7.47
4	7.26	7.38	7.42	7.46
5	7.17	7.29	7.33	7.35
6	7.23	7.34	7.38	7.42
7	......	7.36	7.40	7.42
9	7.37	7.49	7.53	7.57
10	7.42	7.53	7.58	7.61
11	7.41	7.51	7.57	7.60
12	7.36	7.39	7.47	7.50
13	7.42	7.42	7.50	7.53
14	7.45	7.45	7.54	7.57
16	7.45	7.45	7.54	7.54
17	7.58	7.59	7.68	7.66
18	7.68	7.69	7.79	7.79
19	7.62	7.65	7.71	7.73
20	7.58	7.61	7.68	7.68
21	7.53	7.55	7.61	7.62
23	7.54	7.56	7.62	7.61
24	7.51	7.53	7.59	7.59
25	7.41	7.44	7.51	7.51
26	7.49	7.52	7.59	7.60
27	7.48	7.51	7.60	7.60
28	7.50	7.52	7.61	7.62
30	......	7.55	7.64	7.66
31	......	7.58	7.66	7.67

Daily (bid) closing prices of cotton "futures" in New York—Continued.

Dates of sale.	Prices and months of delivery.			
	Apr.	May.	June.	July.
1896.				
Apr. 1	7.58	7.64	7.64	7.66
2	7.60	7.66	7.66	7.68
3	Holiday.			
4	Holiday.			
6	7.63	7.67	7.67	7.69
7	7.63	7.67	7.68	7.70
8	7.67	7.69	7.69	7.71
9	7.64	7.66	7.66	7.68
10	7.61	7.63	7.62	7.64
11	7.61	7.62	7.61	7.62
13	7.67	7.68	7.67	7.69
14	7.70	7.70	7.71	7.71
15	7.70	7.70	7.72	7.71
16	7.73	7.73	7.76	7.76
17	7.70	7.70	7.74	7.73
18	7.69	7.69	7.73	7.72
20	7.66	7.67	7.71	7.70
21	7.68	7.69	7.74	7.73
22	7.80	7.81	7.84	7.83
23	7.82	7.83	7.86	7.81
24	7.80	7.81	7.84	7.82
25	7.80	7.80	7.82	7.79
27	7.77	7.77	7.80	7.76
28	7.89	7.90	7.91	7.88
29	7.87	7.87	7.89	7.85
30	......	7.92	7.94	7.91

Dates of sale.	Prices and months of delivery.			
	May.	June.	July.	Aug.
1896.				
May 1	7.98	7.99	7.97	7.97
2	8.00	8.02	8.00	7.99
4	8.14	8.17	8.12	8.12
5	8.13	8.18	8.12	8.13
6	8.13	8.16	8.11	8.13
7	8.11	8.12	8.09	8.11
8	8.07	8.08	8.06	8.08
9	8.01	8.02	8.02	8.05
11	8.09	8.10	8.11	8.12
12	8.10	8.09	8.10	8.13
13	8.06	8.05	8.06	8.08
14	8.07	8.05	8.07	8.09
15	8.03	8.02	8.04	8.06
16	8.03	8.01	8.03	8.06
18	8.05	8.03	8.06	8.09
19	8.08	8.06	8.08	8.11
20	8.10	8.09	8.11	8.14
21	7.96	7.95	7.98	8.00
22	7.85	7.85	7.86	7.89
23	7.83	7.83	7.81	7.86
25	7.86	7.86	7.88	7.91
26	7.75	7.76	7.78	7.80
27	7.73	7.71	7.74	7.76
28	7.65	7.67	7.64	7.66
29	......	7.68	7.65	7.66
30	Holiday.			

Dates of sale.	Prices and months of delivery.			
	June.	July.	Aug.	Sept.
1896.				
June 1	7.71	7.69	7.70	7.04
2	7.58	7.55	7.56	6.94
3	7.44	7.43	7.42	6.81
4	7.52	7.50	7.49	6.89
5	7.53	7.52	7.51	6.92
6	7.50	7.48	7.47	6.87
8	7.47	7.46	7.45	6.90
9	7.30	7.30	7.28	6.70
10	7.14	7.14	7.13	6.60
11	7.23	7.27	7.26	6.64
12	7.29	7.30	7.28	6.65
13	7.31	7.31	7.30	6.68
15	7.57	7.59	7.58	6.84
16	7.47	7.48	7.47	6.74
17	7.32	7.33	7.33	6.71
18	7.25	7.25	7.26	6.70
19	7.35	7.33	7.34	6.74
20	7.31	7,30	7.32	6.79
22	7.31	7.29	7.32	6.76
23	7.24	7.22	7.25	6.68
24	7.16	7.15	7.17	6.59
25	7.21	7.19	7.22	6.63
26	7.24	7.23	7.25	6.67
27	7.17	7.16	7.18	6.62
29	......	7.14	7.16	6.57
30	......	7.14	7.16	6.57

Dates of sale.	Prices and months of delivery.			
	July.	Aug.	Sept.	Oct.
1896.				
July 1	7.10	7.12	6.56	6.57
2	7.11	7.12	6.58	6.58
3	Holiday.			
4	Holiday.			
6	7.16	7.16	6.63	6.63
7	7.15	7.16	6.61	6.61
8	7.17	7.17	6.62	6.62
9	7.18	7.17	6.62	6.62
10	7.12	7.11	6.55	6.55
11	7.03	7.00	6.47	6.48
13	6.80	6.79	6.31	6.33
14	6.85	6.84	6.34	6.35
15	6.64	6.67	6.19	6.19
16	6.81	6.82	6.26	6.26
17	6.82	6.84	6.28	6.28
18	6.78	6.79	6.22	6.23
20	6.75	6.77	6.25	6.25
21	6.85	6.85	6.30	6.29
22	6.89	6.91	6.37	6.37
23	6.88	6.89	6.38	6.36
24	6.90	6.91	6.37	6.36
25	6.89	6.89	6.35	6.32
27	6.94	6.95	6.41	6.37
28	7.04	7.05	6.49	6.48
29	7.14	7.16	6.61	6.58
30	7.12	7.13	6.64	6.63
31	......	7.19	6.89	6.89

Dates of sale.	Prices and months of delivery.			
	Aug.	Sept.	Oct.	Nov.
1896.				
Aug. 1	7.21	6.92	6.91	6.86
3	7.19	6.89	6.87	6.83
4	7.23	6.98	6.98	6.94
5	7.78	7.53	7.53	7.51
6	8.00	7.68	7.68	7.66
7	7.68	7.41	7.42	7.40
8	7.78	7.49	7.52	7.48
10	8.01	7.68	7.74	7.73
11	7.86	7.53	7.56	7.53
12	7.67	7.31	7.37	7.34
13	7.79	7.45	7.52	7.49
14	7.73	7.53	7.60	7.57
15	7.84	7.58	7.64	7.61
17	8.01	7.75	7.81	7.77
18	8.29	8.06	8.13	8.08
19	8.06	7.91	7.95	7.92
20	8.20	8.07	8.13	8.09
21	8.44	8.34	8.42	8.37
22	8.41	8.30	8.36	8.32
24	8.05	7.93	7.98	7.93
25	8.05	7.93	8.00	7.95
26	7.79	7.67	7.74	7.86
27	7.72	7.60	7.70	7.64
28	7.43	7.46	7.55	7.52
29	......	7.41	7.48	7.44
31	......	7.54	7.62	7.59

Dates of sale.	Prices and months of delivery.			
	Sept.	Oct.	Nov.	Dec.
1896.				
Sept. 1	8.04	8.10	8.09	8.16
2	7.90	7.98	7.97	8.05
3	8.28	8.34	8.29	8.38
4	8.17	8.24	8.20	8.27
5	8.19	8.26	8.24	8.32
7	Holiday.			
8	8.46	8.55	8.55	8.63
9	8.34	8.42	8.41	8.49
10	8.52	8.57	8.56	8.66
11	8.19	8.23	8.23	8.32
12	8.06	8.10	8.09	8.17
14	8.08	8.11	8.11	8.18
15	8.23	8.28	8.28	8.40
16	8.08	8.12	8.12	8.24
17	8.00	8.04	8.05	8.17
18	8.00	8.02	8.04	8.14
19	8.14	8.16	8.19	8.31
21	8.23	8.25	8.28	8.39
22	8.03	8.07	8.07	8.18
23	8.04	8.07	8.08	8.18
24	7.99	8.02	8.02	8.13
25	7.98	8.01	8.00	8.09
26	8.01	8.03	8.03	8.13
28	8.15	8.15	8.16	8.27
29	......	8.09	8.10	8.21
30	......	7.99	7.98	8.09

Daily (bid) closing prices of cotton "futures" in New York—Continued.

Dates of sale.	Prices and months of delivery.			
	Oct.	Nov.	Dec.	Jan.
1896.				
Oct. 1	7.99	7.98	8.09	8.17
2	7.97	7.98	8.10	8.17
3	7.95	7.98	8.08	8.16
5	7.70	7.75	7.87	7.96
6	7.69	7.75	7.87	7.96
7	7.66	7.73	7.86	7.95
8	7.55	7.58	7.71	7.80
9	7.58	7.64	7.78	7.88
10	7.57	7.59	7.74	7.84
12	7.67	7.69	7.85	7.95
13	7.70	7.73	7.90	8.00
14	7.56	7.58	7.75	7.86
15	7.56	7.58	7.75	7.86
16	7.53	7.55	7.74	7.85
17	7.55	7.58	7.76	7.88
19	7.57	7.60	7.79	7.91
20	7.59	7.63	7.82	7.94
21	7.58	7.61	7.81	7.92
22	7.52	7.55	7.74	7.86
23	7.67	7.71	7.91	8.02
24	7.64	7.69	7.88	7.99
26	7.59	7.61	7.78	7.88
27	7.69	7.70	7.85	7.94
28	7.66	7.68	7.83	7.93
29	7.78	7.78	7.93	8.04
30	......	7.81	7.85	8.06
31	......	7.85	8.00	8.11

Dates of sale.	Prices and months of delivery.			
	Nov.	Dec.	Jan.	Feb.
1896.				
Nov. 2	7.88	8.04	8.15	8.21
3	Holiday.			
4	7.75	7.86	7.97	8.02
5	7.74	7.85	7.95	8.01
6	7.80	7.88	7.98	8.01
7	7.78	7.85	7.96	8.01
9	7.93	8.01	8.12	8.17
10	7.87	7.92	8.04	8.09
11	7.78	7.84	7.95	8.00
12	7.81	7.87	7.99	8.04
13	7.62	7.67	7.78	7.84
14	7.64	7.67	7.78	7.85
16	7.49	7.53	7.64	7.71
17	7.53	7.57	7.67	7.74
18	7.38	7.42	7.52	7.59
19	7.39	7.42	7.52	7.58
20	7.41	7.43	7.52	7.58
21	7.42	7.43	7.52	7.58
23	7.37	7.38	7.47	7.51
24	7.45	7.46	7.55	7.62
25	7.47	7.47	7.55	7.62
26	Holiday.			
27	7.58	7.59	7.66	7.73
28	7.43	7.44	7.52	7.60
30	......	7.53	7.60	7.57

Dates of sale.	Prices and months of delivery.			
	Dec.	Jan.	Feb.	Mar.
1896.				
Dec. 1	7.48	7.55	7.63	7.70
2	7.53	7.00	7.67	7.74
3	7.40	7.47	7.55	7.62
4	7.25	7.31	7.39	7.47
5	7.28	7.34	7.42	7.50
7	7.27	7.33	7.40	7.48
8	7.12	7.18	7.26	7.34
9	7.22	7.27	7.35	7.44
10	7.03	7.08	7.16	7.24
11	7.02	7.07	7.14	7.22
12	6.99	7.03	7.11	7.19
14	6.75	6.79	6.86	6.95
15	6.88	6.92	7.00	7.09
16	6.76	6.81	6.89	6.98
17	6.89	6.93	7.02	7.11
18	6.76	6.79	6.89	6.97
19	6.75	6.78	6.86	6.95
21	6.69	6.72	6.81	6.89
22	6.76	6.79	6.87	6.96
23	6.80	6.82	6.91	7.00
24	6.81	6.83	6.91	7.00
25	Holiday.			
26	Holiday.			
28	6.67	6.68	6.76	6.85
29	6.78	6.81	6.90	6.97
30	6.76	6.78	6.84	6.92
31	......	6.92	6.98	7.05

Dates of sale.	Prices and months of delivery.			
	Jan.	Feb.	Mar.	Apr.
1897.				
Jan. 1	Holiday.			
2	Holiday.			
4	6.80	6.85	6.92	7.00
5	6.80	6.85	6.92	6.99
6	6.89	6.94	7.02	7.09
7	6.94	6.98	7.06	7.12
8	7.06	7.09	7.18	7.24
9	7.10	7.13	7.21	7.27
11	6.90	6.93	7.01	7.07
12	6.99	7.02	7.10	7.16
13	6.98	7.00	7.08	7.14
14	6.99	7.02	7.09	7.16
15	6.97	6.97	7.04	7.12
16	6.94	6.94	7.00	7.07
18	6.90	6.91	6.98	7.04
19	6.98	6.99	7.05	7.12
20	7.01	7.02	7.09	7.15
21	7.00	7.01	7.09	7.15
22	7.00	7.01	7.09	7.16
23	7.00	7.00	7.07	7.14
25	6.99	6.99	7.06	7.13
26	7.04	7.03	7.10	7.17
27	7.04	7.02	7.07	7.14
28	7.02	7.00	7.04	7.10
29	......	6.97	7.02	7.08
30	......	6.99	7.03	7.09

Dates of sale.	Prices and months of delivery.			
	Feb.	Mar.	Apr.	May.
1897.				
Feb. 1	7.01	7.06	7.12	7.18
2	6.97	7.02	7.08	7.15
3	......	7.05	7.11	7.17
4	6.99	7.04	7.10	7.17
5	7.00	7.04	7.10	7.17
6	6.95	6.99	7.05	7.12
8	6.83	6.85	6.92	6.99
9	6.85	6.87	6.94	7.01
10	6.76	6.78	6.84	6.91
11	6.73	6.75	6.81	6.88
12	Holiday.			
13	6.60	6.61	6.67	6.73
15	6.73	6.74	6.81	6.87
16	6.82	6.83	6.89	6.94
17	6.71	6.75	6.81	6.87
18	6.82	6.82	6.88	6.94
19	6.80	6.81	6.86	6.92
20	6.85	6.86	6.92	6.98
22	Holiday.			
23	6.89	6.89	6.95	7.00
24	6.90	6.89	6.95	7.00
25	7.00	7.00	7.05	7.10
26	7.06	7.06	7.12	7.16
27	......	7.17	7.21	7.26

Dates of sale.	Prices and months of delivery.			
	Mar.	Apr.	May.	June.
1897.				
Mar. 1	7.14	7.17	7.22	7.27
2	7.01	7.06	7.11	7.15
3	6.97	7.02	7.07	7.11
4	6.87	6.91	6.96	7.01
5	6.91	6.94	7.00	7.04
6	6.84	6.87	6.92	6.96
8	6.96	7.01	7.05	7.10
9	6.91	6.95	7.01	7.05
10	6.95	6.99	7.02	7.07
11	6.92	6.96	7.00	7.04
12	6.90	6.95	6.99	7.03
13	6.95	6.96	7.02	7.07
15	6.99	7.02	7.06	7.11
16	6.99	7.02	7.05	7.10
17	7.01	7.04	7.07	7.12
18	7.00	7.02	7.06	7.10
19	7.02	7.04	7.08	7.13
20	7.00	7.02	7.06	7.10
22	7.02	7.03	7.07	7.11
23	7.01	7.01	7.05	7.09
24	6.93	6.93	6.97	7.01
25	6.96	6.96	7.02	7.06
26	6.95	6.95	7.01	7.05
27	6.95	6.95	6.99	7.03
29	6.92	6.92	6.97	7.02
30	6.94	6.94	6.98	7.02
31	......	6.95	7.01	7.06

Daily (bid) closing prices of cotton "futures" in New York—Continued.

Dates of sale.	Prices and months of delivery.			
	Apr.	May.	June.	July.
1897.				
Apr. 1	6.91	6.97	7.01	7.06
2	......	7.01	7.07	7.11
3	7.02	7.07	7.12	7.18
5	7.01	7.06	7.11	7.15
6	7.00	7.05	7.10	7.14
7	6.98	7.03	7.08	7.12
8	7.01	7.05	7.10	7.15
9	7.05	7.09	7.13	7.18
10	7.03	7.07	7.11	7.15
12	7.02	7.06	7.10	7.15
13	7.03	7.07	7.11	7.15
14	7.08	7.12	7.16	7.20
15	7.04	7.08	7.12	7.17
16	Holiday.			
17	Holiday.			
19	6.90	6.95	7.00	7.05
20	6.94	6.97	7.02	7.07
21	7.03	7.06	7.12	7.16
22	7.04	7.07	7.12	7.17
23	7.07	7.07	7.12	7.16
24	7.12	7.13	7.18	7.22
26	7.23	7.25	7.30	7.35
27	Holiday.			
28	7.36	7.36	7.41	7.46
29	......	7.42	7.43	7.47
30	......	7.48	7.51	7.55

Dates of sale.	Prices and months of delivery.			
	May.	June.	July.	Aug.
1897.				
May 1	7.46	7.48	7.52	7.50
3	7.34	7.37	7.41	7.40
4	7.27	7.30	7.34	7.33
5	7.31	7.35	7.38	7.37
6	7.31	7.34	7.38	7.36
7	7.38	7.39	7.43	7.41
8	7.46	7.47	7.50	7.48
10	7.37	7.38	7.41	7.37
11	7.42	7.44	7.47	7.43
12	7.41	7.42	7.45	7.39
13	7.41	7.42	7.45	7.38
14	7.43	7.44	7.46	7.38
15	7.42	7.43	7.46	7.38
17	7.30	7.30	7.34	7.27
18	7.35	7.35	7.39	7.33
19	7.30	7.31	7.34	7.28
20	7.25	7.25	7.28	7.22
21	7.15	7.15	7.18	7.14
22	7.16	7.17	7.20	7.16
24	7.16	7.16	7.17	7.13
25	7.22	7.22	7.23	7.18
26	7.21	7.21	7.22	7.17
27	7.17	7.17	7.18	7.15
28	7.12	7.13	7.14	7.11
29	......	7.14	7.17	7.15
31	Holiday.			

Dates of sale.	Prices and months of delivery.			
	June.	July.	Aug.	Sept.
1897.				
June 1	7.15	7.18	7.17	6.90
2	7.14	7.17	7.17	6.90
3	7.19	7.22	7.20	6.93
4	7.17	7.20	7.18	6.93
5	7.16	7.18	7.17	6.91
7	7.19	7.22	7.19	6.94
8	7.23	7.24	7.24	7.01
9	7.21	7.23	7.23	7.00
10	7.18	7.19	7.18	6.95
11	7.16	7.16	7.15	6.90
12	7.16	7.17	7.15	6.90
14	7.16	7.16	7.13	6.88
15	7.27	7.27	7.22	6.96
16	7.26	7.26	7.22	6.98
17	7.29	7.30	7.25	7.01
18	7.35	7.35	7.29	7.05
19	7.39	7.39	7.34	7.09
21	7.43	7.43	7.43	7.14
22	7.36	7.37	7.36	7.11
23	7.28	7.29	7.28	7.02
24	7.28	7.28	7.28	7.02
25	7.21	7.21	7.22	7.01
26	7.24	7.24	7.23	7.03
28	7.29	7.30	7.27	7.06
29	7.34	7.34	7.34	7.14
30	......	7.34	7.33	7.15

Dates of sale.	Prices and months of delivery.			
	July.	Aug.	Sept.	Oct.
1897.				
July 1	7.45	7.43	7.27	7.11
2	7.43	7.44	7.27	7.13
3	Holiday.			
5	Holiday.			
6	7.40	7.39	7.20	7.05
7	7.44	7.44	7.25	7.11
8	7.43	7.43	7.28	7.15
9	7.34	7.34	7.18	7.06
10	7.35	7.35	7.17	7.01
12	7.35	7.34	7.14	6.97
13	7.52	7.49	7.28	7.10
14	7.49	7.46	7.26	7.08
15	7.51	7.48	7.28	7.13
16	7.58	7.54	7.34	7.21
17	7.49	7.46	7.25	7.12
19	7.44	7.41	7.19	7.02
20	7.46	7.43	7.23	7.10
21	7.39	7.34	7.17	7.03
22	7.39	7,36	7.19	7.06
23	7.50	7.48	7.26	7.07
24	7.50	7.47	7.27	7.08
26	7.54	7.52	7.35	7.17
27	7.47	7.44	7.28	7.10
28	7.47	7.45	7.25	7.06
29	7.62	7.58	7.31	7.10
30	......	7.59	7.28	7.09
31	......	7.64	7.32	7.13

Dates of sale.	Prices and months of delivery.			
	Aug.	Sept.	Oct.	Nov.
1897.				
Aug. 2	7.63	7.35	7.18	7.11
3	7.53	7.26	7.13	7.07
4	7.55	7.29	7.15	7.10
5	7.52	7.27	7.13	7.07
6	7.57	7.30	7.16	7.10
7	7.55	7.28	7.13	7.07
9	7.59	7.29	7.15	7.09
10	7.56	7.25	7.11	7.06
11	7.54	7.18	7.04	6.96
12	7.54	7.19	7.04	6.96
13	7.57	7.11	6.98	6.90
14	7.59	7.01	6.84	6.78
16	7.55	6.92	6.77	6.71
17	7.47	6.86	6.71	6.64
18	7.51	6.99	6.84	6.71
19	7.46	6.94	6.80	6.69
20	7.48	6.93	6.78	6.67
21	7.60	6.99	6.85	6.73
23	7.95	7.33	7.18	7.07
24	8.13	7.31	7.15	7.04
25	8.10	7.42	7.13	6.99
26	7.95	7.37	7.07	6.90
27	7.99	7.31	6.99	6.80
28	8.13	7.27	6.93	6.79
30	......	7.22	6.91	6.77
31	......	7.19	6.90	6.77

Dates of sale.	Prices and months of delivery.			
	Sept.	Oct.	Nov.	Dec.
1897.				
Sept. 1	7.19	6.94	6.81	6.83
2	7.05	6.83	6.70	6.71
3	7.17	6.91	6.80	6.82
4	7.12	6.86	6.76	6.77
6	Holiday.			
7	7.08	6.83	6.74	6.76
8	7.02	6.81	6.75	6.77
9	7.04	6.87	6.78	6.80
10	7.08	6.90	6.84	6.86
11	6.96	6.80	6.73	6.76
13	6.94	6.80	6.72	6.75
14	6.94	6.81	6.75	6.77
15	6.88	6.82	6.77	6.80
16	6.70	6.69	6.67	6.79
17	6.65	6.59	6.57	6.59
18	6.57	6.54	6.53	6.56
20	6.52	6.46	6.45	6.48
21	6.55	6.49	6.48	6.50
22	6.64	6.58	6.56	6.58
23	6.52	6.45	6.42	6.45
24	6.48	6.46	6.43	6.45
25	6.38	6.35	6.33	6.36
27	6.28	6.28	6.26	6.28
28	6.30	6.31	6.30	6.32
29	6.22	6.25	6.28	6.30
30	......	6.27	6.29	6.32

Daily (bid) closing prices of cotton "futures" in New York—Continued.

Dates of sale.	Prices and months of delivery.			
	Oct.	Nov.	Dec.	Jan.
1897.				
Oct. 1	6.26	6.28	6.31	6.35
2	6.26	6.25	6.29	6.33
4	6.34	6.33	6.37	6.41
5	6.38	6.39	6.42	6.46
6	6.45	6.45	6.49	6.53
7	6.43	6.45	6.49	6.53
8	6.35	6.35	6.40	6.43
9	6.39	6.40	6.45	6.48
11	6.29	6.28	6.32	6.35
12	6.23	6.23	6.28	6.30
13	6.23	6.24	6.28	6.30
14	6.19	6.19	6.22	6.24
15	6.15	6.14	6.18	6.20
16	6.10	6.10	6.15	6.16
18	6.03	6.01	6.05	6.07
19	6.13	6.09	6.12	6.15
20	6.06	6.02	6.05	6.08
21	6.09	6.07	6.09	6.12
22	6.02	6.01	6.03	6.04
23	5.96	5.94	5.96	5.98
25	5.97	5.95	5.97	6.00
26	5.91	5.89	5.92	5.94
27	5.99	5.96	5.98	6.00
28	5.94	5.92	5.94	5.96
29	......	5.81	5.84	5.86
30	......	5.80	5.83	5.86

Dates of sale	Prices and months of delivery.			
	Nov.	Dec.	Jan.	Feb.
1897.				
Nov. 1	5.86	5.88	5.92	5.96
2	Holiday.			
3	5.73	5.75	5.79	5.83
4	5.69	5.71	5.75	5.79
5	5.67	5.69	5.74	5.78
6	5.67	5.68	5.72	5.76
8	5.59	5.59	5.64	5.08
9	5.60	5.60	5.65	5.69
10	5.58	5.59	5.65	5.69
11	5.76	5.76	5.83	5.88
12	5.63	5.64	5.69	5.74
13	5.58	5.58	5.64	5.68
15	5.63	5.63	5.69	5.73
16	5.70	5.70	5.75	5.80
17	5.65	5.65	5.70	5.75
18	5.71	5.71	5.77	5.81
19	5.65	5.65	5.70	5.75
20	5.63	5.63	5.68	5.72
22	5.65	5.65	5.71	5.75
23	5.65	5.65	5.70	5.75
24	5.63	5.63	5.68	5.73
25	Holiday.			
26	5.66	5.66	5.72	5.77
27	5.67	5.67	5.73	5.78
29	5.65	5.66	5.71	5.76
30	......	5.64	5.69	5.73

Dates of sale.	Prices and months of delivery.			
	Dec.	Jan.	Feb.	Mar.
1897.				
Dec. 1	5.61	5.65	5.69	5.74
2	5.61	5.65	5.70	5.74
3	5.70	5.73	5.77	5.82
4	5.68	5.71	5.76	5.80
6	5.66	5.69	5.74	5.78
7	5.66	5.69	5.73	5.78
8	5.69	5.72	5.76	5.80
9	5.65	5.67	5.71	5.75
10	5.66	5.69	5.72	5.76
11	5.69	5.70	5.73	5.77
13	5.70	5.72	5.75	5.79
14	5.69	5.70	5.74	5.78
15	5.67	5.69	5.72	5.76
16	5.65	5.67	5.70	5.75
17	5.65	5.67	5.70	5.74
18	5.66	5.68	5.71	5.75
20	5.72	5.73	5.76	5.80
21	5.72	5.73	5.76	5.80
22	5.75	5.76	5.79	5.84
23	5.79	5.80	5.83	5.87
24	5.73	5.74	5.77	5.82
25	Holiday.			
27	Holiday.			
28	5.70	5.71	5.74	5.79
29	5.74	5.75	5.78	5.82
30	......	5.82	5.85	5.88
31	......	5.78	5.80	5.84

Dates of sale.	Prices and months of delivery.			
	Jan.	Feb.	Mar.	Apr.
1898.				
Jan. 1	Holiday.			
3	Holiday.			
4	5.77	5.80	5.83	5.88
5	5.75	5.76	5.79	5.84
6	5.76	5.78	5.81	5.86
7	5.78	5.80	5.83	5.88
8	5.79	5.81	5.84	5.88
10	5.75	5.77	5.80	5.85
11	5.74	5.74	5.78	5.82
12	5.70	5.70	5.74	5.78
13	5.68	5.68	5.72	5.76
14	5.70	5.70	5.74	5.78
15	5.69	5.69	5.73	5.77
17	5.67	5.67	5.71	5.75
18	5.61	5.60	5.63	5.68
19	5.66	5.65	5.68	5.72
20	5.68	5.68	5.72	5.75
21	5.66	5.65	5.68	5.71
22	5.64	5.63	5.66	5.69
24	5.63	5.63	5.65	5.68
25	5.70	5.68	5.71	5.74
26	5.72	5.71	5.75	5.78
27	5.72	5.73	5.77	5.80
28	5.73	5.71	5.75	5.78
29	......	5.68	5.72	5.75
31	......	5.68	5.71	5.74

Dates of sale.	Prices and months of delivery.			
	Feb.	Mar.	Apr.	May.
1898.				
Feb. 1	5.70	5.74	5.77	5.81
2	5.69	5.72	5.75	5.79
3	5.71	5.74	5.77	5.81
4	5.71	5.75	5.78	5.82
5	5.78	5.82	5.85	5.89
7	5.84	5.88	5.91	5.95
8	5.84	5.88	5.91	5.95
9	6.01	6.04	6.08	6.12
10	5.96	5.99	6.02	6.06
11	6.01	6.04	6.07	6.11
12	Holiday.			
14	5.98	6.00	6.03	6.07
15	5.98	6.00	6.03	6.07
16	5.93	5.95	5.98	6.02
17	5.95	5.97	6.00	6.04
18	5.97	5.99	6.02	6.06
19	5.93	5.95	5.96	6.02
21	5.93	5.94	5.97	6.01
22	Holiday.			
23	6.00	6.01	6.04	6.08
24	5.99	6.00	6.03	6.06
25	6.06	6.07	6.09	6.13
26	6.10	6.11	6.14	6.17
28	......	6.07	6.10	6.13

Dates of sale.	Prices and months of delivery.			
	Mar.	Apr.	May.	June.
1898.				
Mar. 1	6.09	6.12	6.15	6.18
2	6.14	6.17	6.20	6.22
3	6.11	6.14	6.17	6.19
4	6.10	6.13	6.16	6.17
5	6.13	6.15	6.18	6.20
7	6.02	6.05	6.09	6.10
8	6.05	6.07	6.11	6.12
9	6.06	6.07	6.10	6.10
10	6.02	6.04	6.07	6.07
11	5.95	5.96	5.99	6.00
12	5.87	5.88	5.91	5.93
14	5.87	5.88	5.92	5.93
15	5.95	5.95	5.99	6.00
16	5.95	5.95	6.00	6.01
17	5.94	5.93	5.97	5.98
18	5.94	5.94	5.98	5.99
19	5.90	5.90	5.94	5.95
21	5.90	5.90	5.94	5.95
22	5.86	5.86	5.90	5.92
23	5.81	5.81	5.85	5.86
24	5.82	5.82	5.87	5.88
25	5.79	5.79	5.84	5.85
26	5.81	5.81	5.85	5.87
28	5.91	5.91	5.95	5.97
29	5.88	5.88	5.93	5.94
30	5.96	5.96	6.01	6.03
31	......	5.92	5.96	5.98

Daily (bid) closing prices of cotton "futures" in New York—Continued.

Dates of sale.	Prices and months of delivery.			
	Apr.	May.	June.	July.
1898.				
Apr. 1	5.88	5.93	5.96	5.99
2	5.90	5.94	5.97	6.00
4	5.93	5.91	6.01	6.03
5	5.91	5.95	5.98	6.01
6	5.94	5.98	6.01	6.05
7	5.94	5.96	5.99	6.03
8	5.92	5.95	5.98	6.02
9	5.94	5.97	6.00	6.03
11	5.96	5.99	6.02	6.05
12	5.94	5.97	6.00	6.03
13	5.90	5.93	5.96	5.99
14	5.93	5.96	5.99	6.02
15	6.00	6.02	6.01	6.07
16	6.04	6.06	6.09	6.12
18	6.03	6.05	6.08	6.11
19	6.09	6.12	6.15	6.18
20	6.26	6.28	6.31	6.36
21	6.25	6.28	6.32	6.36
22	6.24	6.27	6.30	6.35
23	6.18	6.20	6.25	6.29
25	6.18	6.20	6.25	6.29
26	6.13	6.15	6.21	6.25
27	6.04	6.04	6.13	6.18
28	......	6.11	6.17	6.23
29	......	6.15	6.20	6.26
30	......	6.12	6.17	6.22

Dates of sale.	Prices and months of delivery.			
	May.	June.	July.	Aug.
1898.				
May 2	6.13	6.17	6.22	6.26
3	6.05	6.10	6.14	6.18
4	Holiday.			
5	6.16	6.17	6.22	6.26
6	6.19	6.21	6.25	6.29
7	6.18	6.20	6.24	6.28
9	6.24	6.25	6.30	6.34
10	6.24	6.27	6.33	6.38
11	6.21	6.24	6.30	6.34
12	6.24	6.27	6.33	6.37
13	6.23	6.24	6.30	6.34
14	6.22	6.23	6.28	6.32
16	6.24	6.25	6.31	6.34
17	6.27	6.28	6.33	6.37
18	6.32	6.33	6.38	6.43
19	6.31	6.32	6.37	6.41
20	6.31	6.32	6.37	6.41
21	6.31	6.32	6.37	6.41
23	6.40	6.41	6.45	6.50
24	6.39	6.39	6.43	6.47
25	6.40	6.40	6.45	6.49
26	6.47	6.47	6.51	6.55
27	6.40	6.40	6.44	6.48
28	6.44	6.44	6.48	6.52
30	Holiday.			
31	......	6.43	6.47	6.51

Dates of sale.	Prices and months of delivery.			
	June.	July.	Aug.	Sept.
1898.				
June 1	6.38	6.42	6.46	6.29
2	6.37	6.41	6.45	6.28
3	6.38	6.42	6.46	6.31
4	6.38	6.41	6.45	6.31
6	6.38	6.41	6.45	6.32
7	6.37	6.39	6.43	6.30
8	6.38	6.41	6.45	6.30
9	6.42	6.44	6.48	6.31
10	6.45	6.46	6.50	6.31
11	6.52	6.53	6.57	6.33
13	6.49	6.50	6.54	6.28
14	6.42	6.44	6.48	6.27
15	6.43	6.43	6.47	6.28
16	6.42	6.43	6.46	6.28
17	6.42	6.42	6.46	6.27
18	6.37	6.37	6.40	6.20
20	6.21	6.21	6.25	6.05
21	6.16	6.16	6.19	6.04
22	6.13	6.13	6.16	6.04
23	6.18	6.18	6.22	6.08
24	6.16	6.16	6.20	6.07
25	6.18	6.19	6.21	6.07
27	6.22	6.22	6.23	6.08
28	6.21	6.21	6.22	6.08
29	......	6.17	6.18	6.07
30	......	6.09	6.10	6.00

Dates of sale.	Prices and months of delivery.			
	July.	Aug.	Sept.	Oct.
1898.				
July 1	6.03	6.04	5.95	5.95
2	Holiday.			
4	Holiday.			
5	6.08	6.09	5.98	5.99
6	6.07	6.08	5.99	6.00
7	6.03	6.04	5.97	6.00
8	6.00	6.01	5.98	5.99
9	6.02	6.03	6.00	6.01
11	6.03	6.05	6.00	6.03
12	6.01	6.02	6.00	6.00
13	6.04	6.06	6.05	6.05
14	6.07	6.08	6.07	6.08
15	6.04	6.05	6.04	6.05
16	5.98	6.00	5.97	5.99
18	5.95	5.96	5.93	5.95
19	5.95	5.96	5.95	5.97
20	5.90	5.90	5.91	5.92
21	5.83	5.82	5.84	5.87
22	5.82	5.81	5.82	5.85
23	5.83	5.83	5.84	5.87
25	5.78	5.77	5.80	5.83
26	5.79	5.78	5.82	5.85
27	5.88	5.88	5.90	5.93
28	......	5.94	5.97	6.00
29	......	5.86	6.00	5.93
30	......	5.84	5.88	5.91

Dates of sale.	Prices and months of delivery.			
	Aug.	Sept.	Oct.	Nov.
1898.				
Aug. 1	5.88	5.91	5.96	5.98
2	5.87	5.91	5.95	5.98
3	5.87	5.91	5.96	5.99
4	5.88	5.92	5.97	6.00
5	5.89	5.93	5.97	5.99
6	5.87	5.91	5.95	5.98
8	5.86	5.90	5.93	5.96
9	5.90	5.94	5.97	5.99
10	5.82	5.85	5.88	5.90
11	5.86	5.88	5.91	5.93
12	5.81	5.83	5.85	5.87
13	5.76	5.77	5.80	5.82
15	5.65	5.66	5.70	5.71
16	5.68	5.69	5.73	5.74
17	5.56	5.59	5.63	5.64
18	5.60	5.61	5.64	5.66
19	5.61	5.62	5.66	5.68
20	Holiday.			
22	5.48	5.48	5.52	5.54
23	5.50	5.51	5.57	5.59
24	5.47	5.49	5.54	5.56
25	5.47	5.49	5.54	5.56
26	5.50	5.52	5.57	5.60
27	5.52	5.54	5.58	5.61
29	5.52	5.53	5.58	5.61
30	......	5.51	5.55	5.58
31	......	5.49	5.53	5.56

Dates of sale.	Prices and months of delivery.			
	Sept.	Oct.	Nov.	Dec.
1898.				
Sept. 1	5.56	5.61	5.64	5.68
2	5.50	5.55	5.58	5.62
3	5.48	5.52	5.55	5.58
5	Holiday.			
6	5.46	5.51	5.54	5.58
7	5.46	5.50	5.53	5.57
8	5.56	5.59	5.61	5.65
9	5.51	5.53	5.56	5.60
10	5.52	5.55	5.58	5.62
12	5.52	5.56	5.59	5.63
13	5.51	5.54	5.57	5.61
14	5.42	5.44	5.48	5.51
15	5.34	5.37	5.40	5.44
16	5.35	5.38	5.42	5.46
17	5.28	5.29	5.34	5.38
19	5.27	5.28	5.33	5.37
20	5.23	5.26	5.30	5.35
21	5.20	5.22	5.27	5.33
22	5.23	5.24	5.28	5.34
23	5.19	5.19	5.23	5.29
24	5.17	5.17	5.21	5.26
26	5.12	5.12	5.16	5.22
27	5.17	5.17	5.21	5.26
28	5.21	5.21	5.24	5.29
29	......	5.22	5.25	5.30
30	......	5.20	5.23	5.28

Daily (bid) closing prices of cotton "futures" in New York—Continued.

Dates of sale.	Prices and months of delivery.			
	Oct.	Nov.	Dec.	Jan.
1898.				
Oct. 1	5.15	5.18	5.24	5.28
3	5.19	5.21	5.26	5.31
4	5.22	5.24	5.30	5.34
5	5.28	5.30	5.35	5.40
6	5.24	5.27	5.33	5.37
7	5.21	5.25	5.31	5.35
8	5.21	5.23	5.29	5.33
10	5.15	5.17	5.23	5.27
11	5.16	5.18	5.24	5.28
12	5.16	5.18	5.24	5.28
13	5.20	5.21	5.26	5.31
14	5.22	5.23	5.28	5.33
15	5.22	5.23	5.28	5.32
17	5.30	5.31	5.36	5.41
18	5.23	5.24	5.30	5.34
19	5.19	5.20	5.26	5.30
20	5.20	5.21	5.26	5.31
21	5.20	5.21	5.26	5.31
22	5.20	5.21	5.26	5.31
24	5.14	5.14	5.20	5.25
25	5.17	5.17	5.23	5.28
26	5.14	5.15	5.21	5.26
27	......	5.10	5.17	5.22
28	5.12	5.12	5.18	5.22
29	......	5.08	5.14	5.18
31	......	5.04	5.10	5.15

Dates of sale.	Prices and months of delivery.			
	Nov.	Dec.	Jan.	Feb.
1898.				
Nov. 1	5.07	5.12	5.17	5.21
2	5.03	5.09	5.14	5.18
3	5.02	5.10	5.14	5.18
4	4.97	5.06	5.10	5.14
5	4.98	5.07	5.11	5.16
7	5.01	5.08	5.12	5.16
8	Holiday.			
9	5.05	5.13	5.18	5.22
10	5.00	5.08	5.12	5.16
11	5.03	5.11	5.15	5.19
12	5.03	5.11	5.15	5.19
14	5.12	5.18	5.22	5.26
15	5.09	5.15	5.19	5.23
16	5.09	5.13	5.16	5.20
17	5.13	5.16	5.19	5.23
18	5.16	5.18	5.22	5.26
19	5.14	5.16	5.20	5.24
21	5.18	5.20	5.24	5.27
22	5.21	5.23	5.27	5.30
23	5.24	5.26	5.30	5.33
24	Holiday.			
25	5.25	5.26	5.28	5.31
26	5.28	5.30	5.33	5.36
28	5.42	5.43	5.45	5.49
29	5.34	5.36	5.39	5.42
30	......	5.33	5.34	5.37

Dates of sale.	Prices and months of delivery.			
	Dec.	Jan.	Feb.	Mar.
1898.				
Dec. 1	5.34	5.40	5.42	5.45
2	5.38	5.40	5.42	5.44
3	5.41	5.42	5.43	5.45
5	5.42	5.43	5.44	5.46
6	5.39	5.40	5.41	5.44
7	5.40	5.40	5.40	5.41
8	5.49	5.50	5.49	5.51
9	5.53	5.54	5.52	5.53
10	5.57	5.58	5.55	5.56
12	5.59	5.60	5.58	5.60
13	5.50	5.51	5.51	5.53
14	5.55	5.56	5.55	5.57
15	5.55	5.56	5.55	5.57
16	5.52	5.53	5.52	5.55
17	5.51	5.53	5.52	5.54
19	5.45	5.46	5.47	5.53
20	5.42	5.43	5.44	5.48
21	5.41	5.42	5.44	5.47
22	5.43	5.43	5.46	5.50
23	5.41	5.43	5.44	5.48
24	Holiday.			
26	Holiday.			
27	5.43	5.44	5.46	5.49
28	5.49	5.49	5.50	5.53
29	5.53	5.54	5.56	5.58
30	......	5.51	5.53	5.55
31	Holiday.			

Dates of sale.	Prices and months of delivery.			
	Jan.	Feb.	Mar.	Apr.
1899.				
Jan. 2	Holiday.			
3	5.50	5.51	5.53	5.57
4	5.48	5.49	5.52	5.56
5	5.52	5.52	5.55	5.58
6	5.57	5.56	5.59	5.63
7	5.62	5.60	5.63	5.66
9	5.72	5.68	5.72	5.75
10	5.76	5.74	5.75	5.78
11	5.70	5.68	5.70	5.73
12	5.70	5.68	5.70	5.73
13	5.70	5.70	5.71	5.74
14	5.68	5.68	5.69	5.72
16	5.66	5.66	5.67	5.70
17	5.67	5.67	5.68	5.71
18	5.71	5.77	5.79	5.82
19	5.84	5.81	5.83	5.86
20	5.92	5.87	5.87	5.89
21	5.95	5.93	5.94	5.96
23	6.01	6.00	6.02	6.05
24	6.00	5.98	5.98	6.02
25	6.07	6.05	6.08	6.11
26	6.07	6.07	6.09	6.13
27	6.11	6.11	6.13	6.16
28	6.13	6.14	6.15	6.18
30	......	6.11	6.12	6.14
31	......	6.13	6.14	6.16

Dates of sale.	Prices and months of delivery.			
	Feb.	Mar.	Apr.	May.
1899.				
Feb. 1	6.08	6.09	6.11	6.13
2	6.05	6.07	6.08	6.11
3	5.98	6.00	6.02	6.05
4	6.02	6.04	6.05	6.07
6	6.13	6.15	6.15	6.17
7	6.14	6.16	6.14	6.15
8	6.15	6.18	6.15	5.16
9	6.18	6.20	6.19	6.19
10	6.21	6.23	6.21	6.21
11	6.23	6.24	6.22	6.23
13	Holiday.			
14	6.28	6.29	6.27	6.28
15	6.35	6.36	6.34	6.35
16	6.32	6.33	6.32	6.33
17	6.28	6.29	6.27	6.29
18	6.31	6.32	6.30	6.33
20	6.24	6.25	6.22	6.24
21	6.25	6.26	6.23	6.25
22	Holiday.			
23	6.21	6.21	6.20	6.22
24	6.19	6.19	6.16	6.19
25	6.24	6.25	6.22	6.25
27	6.29	6.30	6.27	6.28
28	......	6.27	6.25	6.26

Dates of sale.	Prices and months of delivery.			
	Mar.	Apr.	May.	June.
1899.				
Mar. 1	6.30	6.28	6.29	6.27
2	6.29	6.26	6.26	6.25
3	6.28	6.26	6.27	6.25
4	6.31	6.29	6.30	6.28
6	6.34	6.31	6.33	6.30
7	6.35	6.33	6.34	6.31
8	6.29	6.27	6.27	6.26
9	6.28	6.27	6.26	6.25
10	6.21	6.21	6.20	6.20
11	6.15	6.15	6.15	6.16
13	6.10	6.10	6.11	6.13
14	6.10	6.11	6.13	6.15
15	6.14	6.15	6.17	6.19
16	6.10	6.09	6.11	6.14
17	6.05	6.03	6.05	6.07
18	5.99	5.96	6.00	6.02
20	5.85	5.82	5.86	5.91
21	5.89	5.87	5.91	5.94
22	5.91	5.92	5.96	5.99
23	5.86	5.87	5.90	5.93
24	5.87	5.89	5.92	5.95
25	5.91	5.92	5.96	5.99
27	5.85	5.86	2.90	5.94
28	5.92	5.91	5.95	5.99
29	......	5.86	5.91	5.95
30	......	5.88	5.92	5.97
31	Holiday.			

Daily (bid) closing prices of cotton "futures" in New York—Continued.

Dates of sale.	Prices and months of delivery.			
	Apr.	May.	June.	July.
1899.				
Apr. 1	Holiday.			
3	5.80	5.85	5.90	5.94
4	5.75	5.80	5.85	5.90
5	5.76	5.81	5.86	5.91
6	5.79	5.84	5.90	5.95
7	5.82	5.86	5.90	5.95
8	5.80	5.84	5.89	5.94
10	5.78	5.82	5.87	5.92
11	5.78	5.83	5.88	5.93
12	5.76	5.80	5.85	5.90
13	5.69	5.73	5.78	5.84
14	5.70	5.74	5.79	5.84
15	5.72	5.76	5.81	5.86
17	5.78	5.82	5.87	5.93
18	5.74	5.76	5.82	5.87
19	5.73	5.75	5.80	5.85
20	5.72	5.74	5.79	5.84
21	5.73	5.75	5.80	5.85
22	5.75	5.78	5.83	5.88
24	......	5.69	5.74	5.80
25	5.68	5.69	5.74	5.80
26	5.75	5.75	5.79	5.86
27	5.77	5.77	5.83	5.89
28	5.80	5.80	5.86	5.92
29	......	5.80	5.85	5.91

Dates of sale.	Prices and months of delivery.			
	May.	June.	July.	Aug.
1899.				
May 1	5.79	5.83	5.88	5.89
2	5.76	5.80	5.85	5.86
3	5.77	5.81	5.86	5.87
4	5.80	5.83	5.88	5.89
5	5.85	5.87	5.92	5.93
6	5.87	5.89	5.94	5.95
8	5.84	5.87	5.91	5.92
9	5.86	5.88	5.92	5.94
10	5.80	5.83	5.86	5.88
11	5.83	5.85	5.89	5.91
12	5.82	5.84	5.88	5.90
13	5.82	5.84	5.88	5.89
15	5.80	5.82	5.86	5.87
16	5.82	5.84	5.87	5.89
17	5.86	5.88	5.92	5.93
18	5.88	5.89	5.92	5.93
19	5.87	5.88	5.91	5.93
20	5.87	5.88	5.92	5.93
22	5.86	5.86	5.89	5.90
23	5.87	5.87	5.90	5.91
24	5.85	5.85	5.89	5.90
25	5.87	5.87	5.91	5.92
26	5.86	5.85	5.88	5.89
27	5.86	5.84	5.87	5.88
29	5.84	5.87	5.90	5.91
30	Holiday.			
31	......	5.87	5.98	5.91

Dates of sale.	Prices and months of delivery.			
	June.	July.	Aug.	Sept.
1899.				
June 1	5.87	5.91	5.91	5.88
2	5.87	5.91	5.92	5.88
3	5.87	5.91	5.91	5.88
5	5.88	5.92	5.92	5.89
6	5.89	5.93	5.93	5.90
7	5.92	5.96	5.97	5.94
8	5.92	5.96	5.97	5.94
9	5.87	5.91	5.92	5.88
10	5.87	5.91	5.88	5.92
12	5.90	5.93	5.94	5.90
13	5.87	5.90	5.91	5.86
14	5.86	5.90	5.91	5.87
15	5.85	5.88	5.91	5.87
16	5.84	5.87	5.90	5.85
17	5.85	5.87	5.89	5.85
19	5.82	5.84	5.87	5.82
20	5.75	5.77	5.80	5.77
21	5.60	5.63	5.66	5.66
22	5.63	5.65	5.68	5.68
23	5.56	5.59	5.64	5.65
24	5.48	5.51	5.55	5.57
26	5.46	5.48	5.54	5.56
27	5.54	5.55	5.60	5.60
28	5.18	5.49	5.54	5.55
29	......	5.49	5.54	5.56
30	......	5.49	5.53	5.55

Dates of sale.	Prices and months of delivery.			
	July.	Aug.	Sept.	Oct.
1899.				
July 1	5.59	5.63	5.64	5.68
3	Holiday.			
4	Holiday.			
5	5.58	5.62	5.63	5.68
6	5.58	5.62	5.63	5.69
7	5.61	5.64	5.66	5.72
8	5.63	5.66	5.68	5.75
10	5.62	5.64	5.67	5.74
11	5.50	5.53	5.55	5.62
12	5.50	5.53	5.54	5.62
13	5.50	5.53	5.55	5.64
14	5.47	5.49	5.52	5.62
15	5.46	5.47	5.50	5.61
17	5.48	5.49	5.52	5.66
18	5.52	5.53	5.56	5.70
19	5.61	5.62	5.66	5.79
20	5.55	5.56	5.59	5.72
21	5.55	5.57	5.61	5.74
22	5.50	5.52	5.55	5.68
24	5.51	5.52	5.56	5.69
25	5.45	5.45	5.50	5.65
26	5.49	5.50	5.65	5.70
27	5.48	5.49	5.53	5.69
28	5.47	5.47	5.53	5.68
29	......	5.50	5.55	5.70
31	......	5.49	5.54	5.69

Dates of sale.	Prices and months of delivery.			
	Aug.	Sept.	Oct.	Nov.
1899.				
Aug. 1	5.50	5.55	5.70	5.74
2	5.51	5.56	5.69	5.73
3	5.56	5.59	5.71	5.75
4	5.54	5.57	5.70	5.75
5	5.53	5.56	5.69	5.74
7	5.56	5.59	5.73	5.77
8	5.60	5.63	5.78	5.83
9	5.72	5.76	5.90	5.94
10	5.75	5.79	5.96	6.01
11	5.91	5.93	6.10	6.15
12	5.86	5.89	6.06	6.11
14	5.75	5.77	5.97	6.02
15	5.65	5.66	5.85	5.90
16	5.52	5.52	5.71	5.75
17	5.53	5.54	5.73	5.77
18	5.55	5.56	5.76	5.79
19	5.56	5.57	5.77	5.80
21	5.77	5.79	5.99	6.03
22	5.73	5.75	5.96	6.00
23	5.86	5.87	6.05	6.08
24	5.80	5.80	5.99	6.03
25	5.79	5.80	6.01	6.05
26	5.85	5.86	6.06	6.11
28	5.83	5.84	6.04	6.09
29	5.76	5.76	5.97	6.01
30	5.69	5.71	5.91	5.96
31	......	5.62	5.82	5.82

Dates of sale.	Prices and months of delivery.			
	Sept.	Oct.	Nov.	Dec.
1899.				
Sept. 1	5.69	5.88	5.93	5.98
2	5.69	5.88	5.93	5.98
4	Holiday.			
5	5.70	5.90	5.95	6.00
6	5.81	6.01	6.06	6.12
7	5.90	6.09	6.14	6.20
8	5.81	5.97	6.03	6.08
9	5.84	6.01	6.06	6.12
11	5.87	6.04	6.09	6.15
12	5.78	5.94	5.97	6.04
13	5.90	6.05	6.10	6.16
14	5.96	6.00	6.05	6.10
15	5.94	5.99	6.03	6.10
16	5.94	5.98	6.02	6.09
18	5.96	6.00	6.05	6.12
19	6.02	6.06	6.11	6.18
20	6.12	6.16	6.22	6.29
21	6.21	6.24	6.29	6.37
22	6.21	6.24	6.30	6.38
23	6.27	6.29	6.33	6.42
25	6.38	6.40	6.47	6.55
26	6.39	6.41	6.47	6.56
27	6.58	6.59	6.67	6.76
28	......	6.63	6.69	6.78
29	Holiday.			
30	Holiday.			

Daily (bid) closing prices of cotton "futures" in New York—Continued.

Dates of sale.	Prices and months of delivery.			
	Oct.	Nov.	Dec.	Jan.
1899.				
Oct. 2	6.96	7.03	7.11	7.17
3	6.87	6.93	7.03	7.08
4	6.91	6.95	7.05	7.11
5	7.00	7.06	7.14	7.20
6	6.82	6.88	6.96	7.03
7	6.95	6.98	7.05	7.11
9	6.89	6.93	7.00	7.06
10	6.90	6.94	6.99	7.04
11	6.91	6.93	6.99	7.04
12	6.80	6.82	6.89	6.93
13	6.85	6.85	6.90	6.95
14	6.89	6.90	6.94	6.99
16	6.83	6.83	6.88	6.92
17	6.88	6.89	6.94	6.99
18	7.07	7.07	7.11	7.17
19	6.99	6.99	7.03	7.09
20	7.04	7.05	7.10	7.13
21	7.06	7.06	7.10	7.13
23	6.99	6.99	7.03	7.06
24	7.02	7.02	7.04	7.08
25	6.98	6.98	7.01	7.04
26	7.04	7.04	7.05	7.08
27	7.04	7.04	7.06	7.09
28	7.08	7.08	7.11	7.13
30	......	7.14	7.16	7.18
31	......	7.08	7.10	7.13

Dates of sale.	Prices and months of delivery.			
	Nov.	Dec.	Jan.	Feb.
1899.				
Nov. 1	7.14	7.16	7.18	7.19
2	7.16	7.18	7.21	7.22
3	7.30	7.31	7.35	7.36
4	7.25	7.26	7.29	7.30
6	7.38	7.38	7.41	7.42
7	Holiday.			
8	7.55	7.56	7.59	7.61
9	7.46	7.47	7.50	7.52
10	7.21	7.26	7.29	7.30
11	7.29	7.29	7.33	7.35
13	7.11	7.13	7.16	7.18
14	7.23	7.24	7.29	7.31
15	7.22	7.23	7.26	7.29
16	7.20	7.24	7.29	7.32
17	7.24	7.27	7.32	7.33
18	7.26	7.29	7.34	7.36
20	7.18	7.21	7.26	7.28
21	7.23	7.26	7.31	7.34
22	7.25	7.26	7.30	7.32
23	7.33	7.36	7.40	7.42
24	7.44	7.46	7.50	7.52
25	Holiday.			
27	7.47	7.50	7.54	7.54
28	7.48	7.50	7.56	7.57
29	......	7.33	7.43	7.45
30	Holiday.			

Dates of sale.	Prices and months of delivery.			
	Dec.	Jan.	Feb.	Mar.
1899.				
Dec. 1	7.44	7.53	7.56	7.59
2	7.40	7.47	7.49	7.51
4	7.42	7.48	7.51	7.54
5	7.35	7.42	7.44	7.47
6	7.28	7.34	7.37	7.40
7	7.35	7.42	7.45	7.59
8	7.28	7.33	7.35	7.41
9	7.35	7.40	7.45	7.50
11	7.30	7.35	7.40	7.45
12	7.33	7.38	7.44	7.48
13	7.25	7.32	7.38	7.43
14	7.27	7.31	7.39	7.45
15	7.27	7.33	7.39	7.46
16	7.20	7.25	7.31	7.38
18	6.97	7.01	7.06	7.12
19	7.08	7.12	7.17	7.23
20	7.11	7.15	7.20	7.27
21	7.03	7.06	7.12	7.18
22	7.04	7.07	7.14	7.20
23	Holiday.			
25	Holiday.			
26	7.14	7.17	7.25	7.32
27	7.27	7.28	7.34	7.38
28	7.38	7.39	7.43	7.48
29	......	7.33	7.37	7.42
30	Holiday.			

Daily closing prices of cotton "futures" in Liverpool.

[Liverpool quotations reduced to American equivalent at 2 cents per penny. From the Commercial and Financial Chronicle.]

Dates of sale.	Prices and months of delivery.			
	Jan.-Feb.	Feb.-Mar.	Mar.-Apr.	Apr.-May.
1894.				
Jan. 2	8.38	8.44	8.50	8.56
3	8.41	8.44	8.50	8.56
4	8.53	8.56	8.62	8.69
5	8.47	8.50	8.56	8.62
6	8.50	8.56	8.59	8.65
8	8.66	8.69	8.72	8.78
9	8.62	8.66	8.72	8.78
10	8.53	8.59	8.62	8.69
11	8.69	8.75	8.78	8.84
12	8.69	8.75	8.81	8.88
13	8.66	8.72	8.78	8.81
15	8.69	8.75	8.81	8.84
16	8.56	8.59	8.66	8.72
17	8.47	8.50	8.56	8.62
18	8.56	8.59	8.66	8.69
19	8.44	8.47	8.50	8.56
20	8.38	8.41	8.47	8.53
22	8.22	8.25	8.31	8.34
23	8.28	8.28	8.34	8.41
24	8.28	8.28	8.34	8.41
25	8.34	8.38	8.41	8.47
26	8.41	8.41	8.47	8.50
27	8.31	8.31	8.38	8.41
29	8.41	8.41	8.47	8.53
30	8.47	8.47	8.53	8.56
31	......	8.38	8.44	8.47

Dates of sale.	Prices and months of delivery.			
	Feb.-Mar.	Mar.-Apr.	Apr.-May.	May-June.
1894.				
Feb. 1	8.38	8.44	8.47	8.53
2	8.34	8.38	8.44	8.50
3	8.28	8.31	8.38	8.44
5	8.31	8.38	8.44	8.47
6	8.28	8.34	8.38	8.44
7	8.34	8.38	8.44	8.50
8	8.34	8.41	8.44	8.50
9	8.34	8.38	8.41	8.47
10	8.31	8.31	8.38	8.44
12	8.31	8.38	8.41	8.47
13	8.31	8.34	8.38	8.44
14	8.25	8.28	8.34	8.41
15	8.28	8.31	8.34	8.41
16	8.28	8.31	8.34	8.41
17	8.31	8.34	8.38	8.44
19	8.28	8.31	8.34	8.41
20	8.22	8.22	8.28	8.34
21	8.16	8.19	8.25	8.28
22	8.06	8.09	8.16	8.19
23	8.09	8.09	8.16	8.22
24	8.03	8.03	8.09	8.16
26	7.91	7.91	7.97	8.03
27	8.00	8.00	8.06	8.09
28	......	8.12	8.19	8.22

Dates of sale.	Prices and months of delivery.			
	Mar.-Apr.	Apr.-May.	May-June.	June-July.
1894.				
Mar. 1	8.16	8.22	8.28	8.34
2	8.19	8.25	8.28	8.34
3	8.19	8.25	8.28	8.34
5	8.06	8.09	8.16	8.19
6	8.09	8.12	8.19	8.22
7	8.12	8.19	8.22	8.28
8	8.16	8.22	8.25	8.31
9	8.12	8.16	8.19	8.25
10	8.03	8.06	8.09	8.16
12	7.97	7.97	8.03	8.06
13	8.03	8.03	8.09	8.12
14	7.97	7.97	8.03	8.06
15	8.03	8.03	8.09	8.12
16	7.97	7.97	8.03	8.06
17	8.00	8.00	8.03	8.09
19	8.00	8.03	8.06	8.12
20	8.03	8.03	8.06	8.12
21	8.06	8.06	8.09	8.16
22	8.03	8.03	8.06	8.12
23	Holiday.			
24	Holiday.			
26	Holiday.			
27	Holiday.			
28	8.06	8.06	8.12	8.16
29	8.19	8.19	8.22	8.28
30	8.16	8.16	8.19	8.25
31	......	8.16	8.19	8.25

Daily closing prices of cotton "futures" in Liverpool—Continued.

Dates of sale.	Prices and months of delivery.			
	Apr.-May.	May-June.	June-July.	July-Aug.
1894.				
Apr. 2	8.25	8.28	8.34	8.38
3	8.25	8.28	8.34	8.38
4	8.22	8.25	8.28	8.31
5	8.25	8.28	8.31	8.34
6	8.25	8.25	8.28	8.31
7	8.22	8.25	8.28	8.31
9	8.25	8.25	8.31	8.34
10	8.22	8.22	8.25	8.31
11	8.12	8.12	8.16	8.19
12	8.12	8.12	8.16	8.22
13	8.03	8.03	8.06	8.12
14	8.03	8.03	8.06	8.09
16	8.06	8.06	8.09	8.12
17	8.00	8.00	8.06	8.09
18	8.06	8.06	8.09	8.12
19	8.03	8.03	8.06	8.09
20	7.97	7.97	8.03	8.06
21	7.97	7.97	8.03	8.06
23	7.91	7.91	7.94	8.00
24	7.94	7.94	7.97	8.03
25	8.00	8.00	8.03	8.06
26	8.00	8.00	8.06	8.09
27	7.94	7.94	7.97	8.03
28	7.94	7.94	7.97	8.03
30	7.84	7.84	7.91	7.94

Dates of sale.	Prices and months of delivery.			
	May-June.	June-July.	July-Aug.	Aug.-Sept.
1894.				
May 1	7.88	7.91	7.94	8.06
2	7.75	7.81	7.84	7.89
3	7.69	7.72	7.75	7.81
4	7.69	7.72	7.75	7.78
5	7.72	7.75	7.78	7.81
7	7.59	7.62	7.66	7.69
8	7.62	7.62	7.66	7.69
9	7.66	7.69	7.72	7.75
10	7.69	7.72	7.75	7.78
11	7.72	7.75	7.78	7.81
12	7.81	7.84	7.91	7.94
14	Holiday.			
15	7.69	7.72	7.75	7.78
16	7.66	7.69	7.72	7.75
17	Holiday.			
18	Holiday.			
19	Holiday.			
21	7.72	7.75	7.78	7.81
22	7.69	7.69	7.72	7.75
23	7.75	7.78	7.81	7.84
24	7.78	7.81	7.84	7.88
25	7.81	7.81	7.84	7.88
26	7.81	7.81	7.88	7.91
28	7.75	7.75	7.81	7.84
29	7.88	7.88	7.91	7.94
30	7.88	7.88	7.91	7.97
31	7.91	7.91	7.94	7.97

Dates of sale.	Prices and months of delivery.			
	June-July.	July-Aug.	Aug.-Sept.	Sept.-Oct.
1894.				
June 1	7.97	7.97	8.06	8.03
2	8.00	8.03	8.06	8.09
4	7.88	7.91	7.94	7.97
5	7.97	8.00	8.00	8.03
6	8.03	8.06	8.09	8.09
7	8.03	8.06	8.09	8.09
8	7.97	7.97	8.00	8.03
9	7.94	7.97	8.00	8.00
11	7.98	7.91	7.94	7.94
12	8.00	8.01	8.03	8.03
13	8.00	8.00	8.03	8.03
14	7.97	7.97	8.00	8.03
15	7.94	7.97	8.00	8.00
16	7.91	7.94	7.94	8.00
18	7.88	7.91	7.94	7.97
19	7.91	7.94	7.97	8.00
20	7.91	7.94	7.97	7.97
21	7.91	7.94	7.97	8.00
22	7.91	7.94	7.97	8.00
23	7.91	7.94	7.97	8.00
25	7.88	7.91	7.94	7.94
26	7.88	7.88	7.94	7.97
27	7.81	7.81	7.84	7.88
28	7.75	7.75	7.81	7.84
29	7.75	7.75	7.78	7.81
30	7.69	7.72	7.75	7.78

Dates of sale.	Prices and months of delivery.			
	July-Aug.	Aug.-Sept.	Sept.-Oct.	Oct.-Nov.
1894.				
July 2	7.75	7.78	7.81	7.84
3	7.75	7.81	7.84	7.88
4	7.84	7.91	7.94	7.97
5	7.81	7.88	7.91	7.94
6	7.78	7.81	7.84	7.88
7	7.75	7.81	7.84	7.88
9	7.69	7.75	7.78	7.81
10	7.72	7.75	7.78	7.81
11	7.69	7.72	7.75	7.78
12	7.72	7.75	7.78	7.81
13	7.72	7.75	7.78	7.81
14	7.69	7.72	7.75	7.78
16	7.72	7.75	7.78	7.81
17	7.78	7.81	7.81	7.84
18	7.75	7.78	7.78	7.81
19	7.72	7.75	7.75	7.78
20	7.72	7.72	7.75	7.78
21	7.72	7.75	7.78	7.78
23	7.69	7.69	7.72	7.75
24	7.56	7.56	7.59	7.59
25	7.56	7.56	7.59	7.59
26	7.56	7.56	7.59	7.62
27	7.56	7.56	7.59	7.62
28	7.53	7.53	7.56	7.59
30	7.44	7.44	7.47	7.50
31	7.34	7.34	7.38	7.41

Dates of sale.	Prices and months of delivery.			
	Aug.-Sept.	Sept.-Oct.	Oct.-Nov.	Nov.-Dec.
1894.				
Aug. 1	7.34	7.38	7.41	7.44
2	7.41	7.41	7.44	7.47
3	7.44	7,44	7.47	7.50
4	Holiday.			
6	Holiday.			
7	Holiday.			
8	7.47	7.47	7.50	7.53
9	7.53	7.53	7.56	7.59
10	7.47	7.47	7.47	7.50
11	7.41	7.44	7.44	7.47
13	7.44	7.47	7.47	7.50
14	7.56	7.56	7.56	7.59
15	7.53	7.53	7.53	7.56
16	7.50	7.50	7.50	7.53
17	7.56	7.56	7.56	7.59
18	7.53	7.53	7.53	7.56
20	7.53	7.53	7.53	7.56
21	7.44	7.44	7.47	7.47
22	7.47	7.47	7.50	7.50
23	7.53	7.53	7.53	7.56
24	7.53	7.50	7.50	7.53
25	7.53	7.50	7.53	7.53
27	7.53	7.50	7.50	7.53
28	7.44	7.44	7.44	7.44
29	7.47	7.44	7.41	7.44
30	7.47	7.41	7.41	7.44
31	7.47	7.44	7.44	7.47

Dates of sale.	Prices and months of delivery.			
	Sept.-Oct.	Oct.-Nov.	Nov.-Dec.	Dec.-Jan.
1894.				
Sept. 1	7.47	7.47	7.47	7.50
3	7.47	7.47	7.47	7.50
4	7.41	7.41	7.44	7.47
5	7.50	7.47	7.50	7.50
6	7.59	7.56	7.56	7.59
7	7.50	7.47	7.50	7.50
8	7.50	7.47	7.50	7.50
10	Holiday.			
11	7.44	7.41	7.41	7.41
12	7.41	7.38	7.41	7.41
13	7.41	7.38	7.38	7.41
14	7.41	7.38	7.38	7.41
15	7.34	7.31	7.31	7.34
17	7.22	7.19	7.22	7.25
18	7.19	7.16	7.16	7.19
19	7.16	7.16	7.16	7.19
20	7.03	7.00	7.03	7.06
21	7.00	6.97	7.00	7.03
22	6.94	6.94	6.94	6.97
24	6.94	6.91	6.94	6.97
25	6.94	6.91	6.94	6.97
26	6.81	6.78	6.78	6.84
27	6.81	6.78	6.78	6.81
28	6.78	6.75	6.75	6.78
29	6.66	6.69	6.69	6.75

Daily closing prices of cotton "futures" in Liverpool—Continued.

Dates of sale.	Prices and months of delivery.			
	Oct.-Nov.	Nov.-Dec.	Dec.-Jan.	Jan.-Feb.
1894.				
Oct. 1	6.59	6.59	6.62	6.66
2	6.56	6.56	6.59	6.62
3	6.59	6.59	6.62	6.66
4	6.66	6.66	6.69	6.72
5	6.75	6.75	6.78	6.81
6	6.66	6.66	6.69	6.72
8	6.62	6.62	6.66	6.69
9	6.62	6.62	6.62	6.69
10	6.56	6.56	6.59	6.62
11	6.50	6.50	6.50	6.56
12	6.38	6.38	6.38	6.44
13	6.44	6.44	6.44	6.47
15	6.41	6.41	6.44	6.47
16	6.38	6.38	6.38	6.41
17	6.41	6.41	6.41	6.44
18	6.28	6.28	6.31	6.34
19	6.28	6.25	6.28	6.28
20	6.19	6.19	6.19	6.22
22	6.09	6.09	6.09	6.12
23	6.19	6.19	6.22	6.25
24	6.22	6.22	6.25	6.28
25	6.12	6.12	6.12	6.19
26	6.12	6.12	6.16	6.25
27	6.03	6.03	6.09	6.16
29	6.06	6.06	6.12	6.19
30	6.03	6.03	6.09	6.16
31	6.00	6.06	6.12	6.16

Dates of sale.	Prices and months of delivery.			
	Nov.-Dec.	Dec.-Jan.	Jan.-Feb.	Feb.-Mar.
1894.				
Nov. 1	5.94	6.03	6.06	6.12
2	6.00	6.06	6.09	6.16
3	6.06	6.09	6.12	6.19
5	6.00	6.03	6.06	6.12
6	6.00	6.03	6.09	6.12
7	6.00	6.03	6.06	6.12
8	5.88	5.91	5.94	6.00
9	5.81	5.81	5.88	5.91
10	5.78	5.81	5.84	5.91
12	5.69	5.72	5.75	5.81
13	5.75	5.75	5.81	5.84
14	5.91	5.94	5.97	6.03
15	5.91	5.94	5.97	6.03
16	5.81	5.81	5.84	5.91
17	5.75	5.78	5.81	5.88
19	5.97	5.97	6.00	6.06
20	5.91	5.91	5.94	6.00
21	6.00	6.00	6.03	6.07
22	6.00	6.00	6.06	6.12
23	6.16	6.16	6.19	6.22
24	6.25	6.25	6.28	6.34
26	6.16	6.16	6.19	6.25
27	6.34	6.34	6.38	6.41
28	6.22	6.22	6.25	6.28
29	6.19	6.19	6.19	6.25
30	6.09	6.09	6.12	6.16

Dates of sale.	Prices and months of delivery.			
	Dec.-Jan.	Jan.-Feb.	Feb.-Mar.	Mar.-Apr.
1894.				
Dec. 1	6.06	6.06	6.09	6.16
3	6.06	6.06	6.09	6.12
4	6.09	6.09	6.12	6.16
5	6.03	6.03	6.06	6.09
6	6.09	6.09	6.12	6.16
7	6.16	6.16	6.19	6.22
3	6.09	6.09	6.12	6.16
10	6.06	6.06	6.09	6.12
11	6.06	6.06	6.09	6.12
12	6.03	6.03	6.06	6.09
13	6.00	6.00	6.03	6.06
14	6.00	6.00	6.03	6.06
15	6.12	6.12	6.16	6.19
17	6.00	6.00	6.03	6.06
18	5.97	5.97	6.00	6.03
19	5.97	5.97	6.03	6.06
20	5.94	5.94	5.97	6.03
21	5.88	5.88	5.94	5.97
22	5.84	5.84	5.91	5.94
24	Holiday.			
25	Holiday.			
26	Holiday.			
27	5.91	5.91	5.94	6.00
28	5.97	5.97	6.03	6.06
29	5.97	6.03	6.06	6.12
31	Holiday			

Dates of sale.	Prices and months of delivery.			
	Jan.-Feb.	Feb.-Mar.	Mar.-Apr.	Apr.-May.
1895.				
Jan. 2	5.97	6.03	6.06	6.12
3	5.88	5.91	5.97	6.00
4	5.91	5.94	5.97	6.00
5	5.97	6.00	6.03	6.06
7	5.94	5.97	6.00	6.03
8	5.97	6.00	6.03	6.06
9	6.06	6.06	6.09	6.16
10	5.97	6.00	6.03	6.09
11	5.97	6.00	6.03	6.09
12	5.94	5.97	6.03	6.06
14	5.97	6.00	6.06	6.09
15	5.94	5.97	6.00	6.03
16	5.94	5.97	6.00	6.03
17	5.97	6.00	6.03	6.06
18	5.94	6.00	6.03	6.09
19	5.91	5.97	5.97	6.03
21	5.91	5.94	5.97	6.00
22	5.84	5.88	5.94	5.97
23	5.84	5.88	5.91	5.97
24	5.84	5.84	5.91	5.94
25	5.84	5.84	5.88	5.94
26	5.84	5.88	5.88	5.94
28	5.78	5.78	5.81	5.88
29	5.78	5.78	5.81	5.88
30	5.75	5.75	5.81	5.84
31	5.78	5.78	5.81	5.84

Dates of sale.	Prices and months of delivery.			
	Feb.-Mar.	Mar.-Apr.	Apr.-May.	May-June.
1895.				
Feb. 1	5.75	5.78	5.84	5.88
2	5.78	5.81	5.88	5.91
4	5.75	5.78	5.84	5.88
5	5.78	5.81	5.84	5.91
6	5.78	5.81	5.84	5.88
7	5.88	5.91	5.97	6.00
8	5.94	5.97	6.00	6.06
9	5.91	5.94	5.97	6.03
11	5.84	5.88	5.91	5.94
12	5.88	5.91	5.97	6.00
13	5.84	5.88	5.94	5.97
14	5.91	5.94	5.97	6.03
15	5.91	5.91	5.97	6.03
16	5.91	5.94	5.97	6.00
18	5.94	5.97	6.00	6.03
19	5.97	5.97	6.03	6.03
20	5.97	5.97	6.00	6.06
21	5.91	5.91	5.94	6.00
22	Holiday.			
23	5.91	5.91	5.94	6.00
25	5.88	5.88	5.91	5.94
26	5.84	5.84	5.88	5.91
27	5.81	5.81	5.84	5.91
28	5.78	5.78	5.84	5.88

Dates of sale.	Prices and months of delivery.			
	Mar.-Apr.	Apr.-May.	May-June.	June-July.
1895.				
Mar. 1	5.84	5.88	5.91	5.97
2	5.84	5.91	5.94	5.97
4	5.91	5.94	6.00	6.03
5	5.91	5.94	5.97	6.00
6	5.97	6.00	6.06	6.09
7	5.97	6.03	6.06	6.09
8	6.03	6.06	6.12	6.16
9	6.09	6.12	6.16	6.19
11	6.09	6.12	6.16	6.19
12	6.19	6.22	6.25	6.28
13	6.22	6.25	6.28	6.34
14	6.28	6.31	6.34	6.38
15	6.31	6.34	6.38	6.41
16	6.41	6.44	6.47	6.50
18	6.34	6.38	6.41	6.44
19	6.50	6.50	6.53	6.56
20	6.56	6.53	6.59	6.62
21	6.53	6.53	6.56	6.59
22	6.41	6.41	6.44	6.47
23	6.31	6.31	6.34	6.41
25	6.53	6.53	6.56	6.59
26	6.53	6.53	6.56	6.59
27	6.44	6.44	6.47	6.53
28	6.44	6.44	6.47	6.50
29	6.44	6.44	6.47	6.53
30	6.53	6.56	6.62	6.66

Daily closing prices of cotton "futures" in Liverpool—Continued.

Dates of sale.	Prices and months of delivery.			
	Apr.-May.	May-June.	June-July.	July-Aug.
1895.				
Apr. 1	6.62	6.66	6.69	6.72
2	6.56	6.59	6.66	6.69
3	6.59	6.59	6.66	6.69
4	6.53	6.56	6.59	6.66
5	6.50	6.53	6.59	6.62
6	6.59	6.66	6.69	6.72
8	6.66	6.69	6.72	6.75
9	6.66	6.69	6.75	6.78
0	6.69	6.72	6.78	6.81
11	6.72	6.78	6.81	6.84
12	Holiday.			
13	Holiday.			
15	Holiday.			
16	Holiday.			
17	6.94	6.97	7.03	7.06
18	6.97	7.00	7.03	7.06
19	7.03	7.06	7.09	7.12
20	7.19	7.19	7.25	7.28
22	7.03	7.06	7.09	7.12
23	7.06	7.16	7.22	7.28
24	7.22	7.22	7.28	7.31
25	7.12	7.16	7.19	7.25
26	7.16	7.16	7.22	7.25
27	7.19	7.19	7.22	7.28
29	7.16	7.16	7.19	7.25
30	7.09	7.09	7.12	7.19

Dates of sale.	Prices and months of delivery.			
	May-June.	June-July.	July-Aug.-	Aug.-Sept.
1895.				
May 1	6.97	7.00	7.03	7.09
2	7.12	7.12	7.19	7.22
3	7.03	7.06	7.09	7.12
4	7.09	7.12	7.16	7.19
6	7.03	7.03	7.09	7.12
7	7.03	7.06	7.09	7.12
8	7.03	7.06	7.09	7.12
9	7.16	7.16	7.19	7.25
10	7.12	7.16	7.19	7.22
11	7.06	7.09	7.12	7.16
13	7.09	7.12	7.16	7.19
14	7.12	7.12	7.19	7.22
15	7.16	7.19	7.22	7.25
16	7.22	7.25	7.25	7.28
17	7.28	7.31	7.34	7.38
18	7.44	7.47	7.50	7.53
20	7.47	7.47	7.50	7.56
21	7.41	7.41	7.44	7.47
22	7.56	7.56	7.62	7.66
23	7.62	7.66	7.69	7.72
24	7.59	7.59	7.62	7.69
25	7.72	7.75	7.78	7.81
27	7.62	7.62	7.69	7.72
28	7.59	7.59	7.62	7.66
29	7.66	7.66	7.69	7.75
30	7.72	7.72	7.75	7.78
31	7.66	7.66	7.69	7.72

Dates of sale.	Prices and months of delivery.			
	June-July.	July-Aug.	Aug.-Sept.	Sept.-Oct.
1895.				
June 1	Holiday.			
3	Holiday.			
4	7.62	7.66	7.69	7.72
5	7.59	7.62	7.66	7.66
6	Holiday.			
7	Holiday.			
8	Holiday.			
10	7.69	7.72	7.75	7.75
11	7.69	7.72	7.75	7.75
12	7.59	7.59	7.62	7.62
13	7.56	7.59	7.62	7.62
14	7.47	7.50	7.53	7.56
15	7.41	7.44	7.47	7.47
17	7.41	7.47	7.50	7.50
18	7.31	7.34	7.38	7.41
19	7.31	7.34	7.38	7.38
20	7.34	7.38	7.41	7.41
21	7.28	7.31	7.38	7.41
22	7.31	7.34	7.38	7.41
24	7.19	7.22	7.25	7.28
25	7.09	7.12	7.16	7.16
26	7.22	7.25	7.28	7.31
27	7.19	7.22	7.25	7.28
28	7.25	7.25	7.28	7.31
29	7.31	7.34	7.38	7.41

Dates of sale.	Prices and months of delivery.			
	July-Aug.	Aug.-Sept.	Sept.-Oct.	Oct.-Nov.
1895.				
July 1	7.41	7.47	7.50	7.53
2	7.38	7.44	7.47	7.50
3	7.44	7.50	7.53	7.56
4	7.41	7.47	7.50	7.53
5	7.31	7.38	7.41	7.44
6	7.25	7.31	7.34	7.38
8	7.38	7.44	7.47	7.50
9	7.38	7.44	7.47	7.50
10	7.34	7.41	7.47	7.50
11	7.31	7.34	7.41	7.44
12	7.31	7.38	7.41	7.44
13	7.28	7.34	7.41	7.44
15	7.28	7.34	7.38	7.41
16	7.25	7.31	7.38	7.41
17	7.31	7.38	7.41	7.44
18	7.31	7.34	7.41	7.44
19	7.25	7.28	7.34	7.38
20	7.28	7.31	7.38	7.41
22	7.31	7.34	7.41	7.44
23	7.31	7.34	7.38	7.41
24	7.22	7.22	7.28	7.31
25	7.22	7.25	7.28	7.34
26	7.28	7.28	7.34	7.38
27	7.25	7.25	7.28	7.34
29	7.25	7.25	7.28	7.34
30	7.25	7.25	7.28	7.34
31	7.25	7.31	7.34	7.38

Dates of sale.	Prices and months of delivery.			
	Aug.-Sept.	Sept.-Oct.	Oct.-Nov.	Nov.-Dec.
1895.				
Aug. 1	7.34	7.41	7.44	7.47
2	7.38	7.44	7.47	7.50
3	Holiday.			
5	Holiday.			
6	Holiday.			
7	7.47	7.53	7.56	7.59
8	7.50	7.53	7.56	7.62
9	7.50	7.53	7.56	7.59
10	7.50	7.53	7.59	7.62
12	7.78	7.81	7.84	7.88
13	7.81	7.88	7.91	7.94
14	7.81	7.84	7.88	7.91
15	7.75	7.78	7.81	7.88
16	7.66	7.69	7.72	7.78
17	7.75	7.78	7.81	7.88
19	7.72	7.75	7.81	7.84
20	7.75	7.78	7.81	7.88
21	7.91	7.94	7.97	8.00
22	7.97	7.97	8.00	8.06
23	8.06	8.06	8.12	8.16
24	8.09	8.09	8.16	8.19
26	8.06	8.06	8.12	8.16
27	8.16	8.16	8.22	8.22
28	8.38	8.38	8.41	8.44
29	8.38	8.38	8.44	8.47
20	8.47	8.47	8.53	8.56
31	8.28	8.28	8.31	8.34

Dates of sale.	Prices and months of delivery.			
	Sept.-Oct.	Oct.-Nov.	Nov.-Dec.	Dec.-Jan.
1895.				
Sept. 2	8.44	8.47	8.50	8.53
3	8.50	8.50	8.53	8.56
4	8.50	8.47	8.56	8.59
5	8.47	8.44	8.47	8.50
6	8.41	8.41	8.41	8.44
7	8.50	8.47	8.50	8.53
9	8.66	8.66	8.66	8.69
10	8.56	8.56	8.59	8.62
11	8.59	8.56	8.59	8.62
12	8.47	8.47	8.47	8.50
13	8.53	8.50	8.50	8.56
14	8.50	8.47	8.50	8.53
16	8.34	8.31	8.38	8.38
17	8.47	8.44	8.44	8.47
18	8.56	8.53	8.53	8.56
19	8.59	8.56	8.59	8.59
20	8.66	8.62	8.62	8.66
21	8.75	8.72	8.72	8.75
23	8.75	8.72	8.72	8.75
24	8.81	8.78	8.78	8.81
25	9.06	9.06	9.06	9.09
26	9.06	9.06	9.06	9.09
27	9.38	9.34	9.31	9.41
28	9.22	9.22	9.22	9.25
30	9.44	9.41	9.41	9.44

Daily closing prices of cotton "futures" in Liverpool—Continued.

Dates of sale.	Prices and months of delivery.			
	Oct.-Nov.	Nov.-Dec.	Dec.-Jan.	Jan.-Feb.
1895.				
Oct. 1	9.44	9.41	9.47	9.50
2	9.25	9.25	9.28	9.31
3	9.44	9.44	9.47	9.50
4	9.44	9.41	9.47	9.50
5	9.28	9.28	9.31	9.38
7	9.31	9.31	9.34	9.41
8	9.31	9.31	9.34	9.41
9	9.47	9.47	9.50	9.53
10	9.44	9.44	9.47	9.53
11	9.47	9.47	9.50	9.53
12	9.44	9.44	9.47	9.53
14	9.56	9.56	9.59	9.62
15	9.72	9.72	9.75	9.78
16	9.78	9.78	9.81	9.84
17	9.59	9.59	9.62	9.66
18	9.56	9.56	9.59	9.62
19	9.53	9.53	9.53	9.59
21	8.97	8.97	9.00	9.00
22	8.91	8.91	8.91	8.97
23	9.00	8.97	9.00	9.03
24	8.94	8.91	8.94	8.97
25	9.00	9.00	9.00	9.03
26	9.06	9.06	9.06	9.09
28	9.12	9.09	9.12	9.12
29	9.31	9.31	9.31	9.31
30	9.47	9.41	9.44	9.47
31	9.28	9.28	9.28	9.28

Dates of sale.	Prices and months of delivery.			
	Nov.-Dec.	Dec.-Jan.	Jan.-Feb.	Feb.-Mar.
1895.				
Nov. 1	9.38	9.34	9.34	9.38
2	9.25	9.25	9.28	9.31
3	9.34	9.34	9.34	9.41
5	9.25	9.25	9.25	9.28
6	9.22	9.22	9.22	9.25
7	9.19	9.19	9.19	9.22
8	9.12	9.12	9.16	9.19
9	9.00	9.00	9.00	9.03
11	9.06	9.06	9.09	9.09
12	8.81	8.81	8.84	8.88
13	8.91	8.91	8.94	8.97
14	8.78	8.78	8.78	8.81
15	8.72	8.72	8.72	8.72
16	8.75	8.75	8.75	8.78
18	8.84	8.81	8.84	8.88
19	8.66	8.66	8.66	8.66
20	8.75	8.72	8.72	8.75
21	8.81	8.81	8.81	8.81
22	8.91	8.88	8.88	8.91
23	9.00	8.97	8.97	9.00
25	9.09	9.06	9.06	9.09
26	9.12	9.12	9.12	9.12
27	9.06	9.03	9.03	9.03
28	9.12	9.09	9.09	9.09
29	9.12	9.12	9.09	9.09
30	9.12	9.12	9.12	9.12

Dates of sale.	Prices and months of delivery.			
	Dec.-Jan.	Jan.-Feb.	Feb.-Mar.	Mar.-Apr.
1895.				
Dec. 2	8.94	8.91	8.91	8.94
3	8.94	8.94	8.94	8.97
4	8.75	8.75	8.78	8.78
5	8.75	8.75	8.75	8.78
6	8.84	8.84	8.84	8.84
7	8.81	8.81	8.81	8.81
9	8.94	8.91	8.91	8.91
10	8.97	8.97	8.97	8.97
11	8.97	8.97	8.97	8.97
12	8.91	8.91	8.91	8.94
13	9.00	8.97	8.97	8.97
14	9.03	9.03	9.03	9.03
16	9.00	9.00	9.00	9.00
17	9.06	9.03	9.03	9.03
18	9.00	8.97	8.94	8.94
19	8.91	8.88	8.88	8.88
20	8.88	8.84	8.84	8.84
21	8.72	8.69	8.69	8.66
23	8.62	8.62	8.62	8.62
24	8.66	8.66	8.66	8.66
25	Holiday.			
26	Holiday.			
27	Holiday.			
28	Holiday.			
30	8.66	8.62	8.62	8.62
31	8.84	8.84	8.84	8.84

Dates of sale.	Prices and months of delivery.			
	Jan.-Feb.	Feb. Mar.	Mar.-Apr.	Apr.-May.
1896.				
Jan. 2	8.97	8.97	8.97	8.97
3	8.88	8.88	8.88	8.91
4	8.88	8.84	8.84	8.84
6	8.84	8.81	8.78	8.78
7	8.81	8.78	8.75	8.75
8	8.72	8.69	8.69	8.69
9	8.81	8.78	8.78	8.78
10	8.88	8.84	8.84	8.84
11	8.84	8.84	8.81	8.81
13	8.84	8.81	8.78	8.75
14	8.84	8.84	8.81	8.78
15	8.78	8.78	8.75	8.69
16	8.69	8.69	8.69	8.66
17	8.75	8.75	8.75	8.72
18	8.75	8.72	8.72	8.69
20	8.72	8.72	8.69	8.66
21	8.84	8.81	8.81	8.78
22	8.84	8.81	8.78	8.78
23	8.88	8.84	8.84	8.84
24	8.94	8.88	8.88	8.88
25	8.94	8.91	8.91	8.88
27	8.91	8.88	8.84	8.84
28	8.84	8.81	8.81	8.78
29	8.94	8.91	8.91	8.88
30	8.97	8.94	8.91	8.88
31	8.91	8.88	8.84	8.81

Dates of sale.	Prices and months of delivery.			
	Feb.-Mar.	Mar.-Apr.	Apr.-May.	May-June.
1896.				
Feb. 1	8.91	8.88	8.84	8.81
3	8.94	8.91	8.88	8.84
4	8.91	8.88	8.84	8.78
5	8.91	8.91	8.84	8.84
6	8.91	8.88	8.84	8.81
7	8.88	8.84	8.81	8.78
8	8.88	8.84	8.81	8.78
10	8.84	8.84	8.81	8.78
11	8.78	8.75	8.72	8.69
12	8.78	8.75	8.72	8.69
13	8.72	8.72	8.69	8.66
14	8.81	8.78	8.75	8.72
15	8.81	8.75	8.72	8.69
17	8.59	8.56	8.53	8.50
18	8.69	8.62	8.59	8.56
19	8.59	8.56	8.50	8.50
20	8.59	8.56	8.50	8.50
21	8.75	8.72	8.69	8.66
22	8.72	8.72	8.66	8.66
24	8.72	8.69	8.66	8.66
25	8.62	8.59	8.56	8.53
26	8.66	8.62	8.59	8.56
27	8.53	8.50	8.47	8.47
28	8.47	8.44	8.41	8.41
29	......	8.47	8.47	8.47

Dates of sale.	Prices and months of delivery.			
	Mar.-Apr.	Apr.-May.	May-June.	June-July.
1896.				
Mar. 2	8.31	8.31	8.31	8.28
3	8.28	8.25	8.25	8.25
4	8.34	8.31	8.31	8.31
5	8.22	8.22	8.22	8.19
6	8.28	8.25	8.22	8.22
7	8.38	8.31	8.34	8.31
9	8.47	8.44	8.41	8.41
10	8.53	8.50	8.44	8.44
11	8.56	8.53	8.50	8.47
12	8.59	8.56	8.53	8.50
13	8.47	8.44	8.41	8.38
14	8.56	8.53	8.50	8.47
16	8.44	8.41	8.38	8.34
17	8.44	8.41	8.38	8.31
18	8.56	8.56	8.53	8.50
19	8.59	8.59	8.56	8.53
20	8.59	8.56	8.56	8.50
21	8.62	8.62	8.59	8.56
23	8.53	8.53	8.50	8.44
24	8.53	8.53	8.50	8.44
25	8.47	8.44	8.41	8.34
26	8.47	8.44	8.41	8.34
27	8.50	8.47	8.47	8.44
28	8.47	8.44	8.41	8.34
30	8.53	8.50	8.47	8.44
31	8.59	8.56	8.53	8.37

Daily closing prices of cotton "futures" in Liverpool—Continued.

Dates of sale.	Prices and months of delivery.			
	Apr.-May.	May-June.	June-July.	July-Aug.
1896.				
Apr. 1	8.50	8.47	8.41	8.41
2	8.53	8.50	8.44	8.41
3	Holiday.			
4	Holiday.			
6	Holiday.			
7	Holiday.			
8	8.53	8.53	8.47	8.44
9	8.59	8.53	8.47	8.44
10	8.50	8.47	8.41	8.38
11	8.50	8.47	8.41	8.34
13	8.47	8.44	8.38	8.34
14	8.56	8.53	8.44	8.41
15	8.53	8.53	8.44	8.41
16	8.59	8.53	8.47	8.44
17	8.59	8.56	8.47	8.44
18	8.56	8.53	8.47	8.44
20	8.50	8.47	8.41	8.38
21	8.53	8.50	8.41	8.38
22	8.56	8.53	8.47	8.44
23	8.59	8.56	8.50	8.47
24	8.59	8.56	8.50	8.47
25	8.56	8.53	8.47	8.44
27	8.50	8.47	8.41	8.38
28	8.56	8.53	8.47	8.44
29	8.53	8.50	8.44	8.41
30	8.56	8.53	8.47	8.44

Dates of sale.	Prices and months of delivery.			
	May-June.	June-July.	July-Aug.	Aug.-Sept.
1896.				
May 1	8.56	8.47	8.44	8.34
2	8.59	8.50	8.47	8.38
4	8.59	8.53	8.50	8.38
5	8.69	8.62	8.59	8.50
6	8.66	8.59	8.56	8.47
7	8.62	8.56	8.53	8.44
8	8.62	8.56	8.53	8.44
9	8.62	8.56	8.50	8.41
11	8.56	8.50	8.44	8.38
12	8.59	8.53	8.47	8.38
13	8.56	8.50	8.44	8.34
14	8.50	8.44	8.38	8.28
15	8.50	8.41	8.38	8.28
16	8.44	8.38	8.31	8.22
18	8.47	8.38	8.34	8.25
19	8.50	8.38	8.38	8.25
20	8.53	8.47	8.41	8.31
21	8.53	8.47	8.41	8.31
22	8.41	8.34	8.31	8.00
23	8.38	8.31	8.28	8.22
25	Holiday.			
26	8.28	8.22	8.19	8.12
27	8.06	8.03	8.03	7.97
28	Holiday.			
29	Holiday.			
30	Holiday.			

Dates of sale.	Prices and months of delivery.			
	June-July.	July-Aug.	Aug.-Sept.	Sept.-Oct.
1896.				
June 1	7.97	7.97	7.91	7.75
2	7.97	7.94	7.91	7.72
3	7.75	7.75	7.69	7.50
4	7.78	7.78	7.75	7.62
5	7.66	7.66	7.59	7.47
6	7.81	7.81	7.78	7.66
8	7.72	7.72	7.69	7.53
9	7.62	7.62	7.59	7.44
10	7.56	7.56	7.50	7.38
11	7.44	7.44	7.41	7.25
12	7.59	7.59	7.53	7.34
13	7.59	7.56	7.50	7.31
15	7.78	7.75	7.69	7.44
16	7.81	7.81	7.75	7.50
17	7.69	7.66	7.59	7.41
18	7.72	7.69	7.62	7.41
19	7.66	7.66	7.56	7.38
20	7.78	7.75	7.72	7.50
22	7.69	7.66	7.56	7.38
23	7.66	7.62	7.56	7.34
24	7.62	7.59	7.50	7.34
25	7.56	7.53	7.47	7.31
26	7.62	7.59	7.50	7.34
27	7.75	7.72	7.59	7.47
29	7.62	7.59	7.50	7.31
30	7.59	7.56	7.47	7.28

Dates of sale.	Prices and months of delivery.			
	July-Aug.	Aug.-Sept.	Sept.-Oct.	Oct.-Nov.
1896.				
July 1	7.59	7.50	7.28	7.19
2	7.66	7.53	7.31	7.22
3	7.75	7.62	7.38	7.28
4	7.78	7.66	7.41	7.31
6	7.66	7.53	7.28	7.22
7	7.72	7.59	7.34	7.25
8	7.69	7.53	7.31	7.22
9	7.72	7.56	7.34	7.22
10	7.69	7.53	7.31	7.19
11	7.66	7.50	7.25	7.12
13	7.50	7.31	7.12	7.00
14	7.38	7.19	7.00	6.91
15	7.34	7.16	7.00	6.88
16	7.25	7.09	6.91	6.81
17	7.34	7.16	6.97	6.88
18	7.34	7.16	6.94	6.84
20	7.34	7.16	6.97	6.88
21	7.28	7.12	6.97	6.84
22	7.28	7.12	6.97	6.84
23	7.34	7.22	7.03	6.94
24	7.34	7.22	7.03	6.94
25	7.34	7.22	7.03	6.94
27	7.22	7.09	6.94	6.84
28	7.34	7.22	7.06	6.97
29	7.38	7.28	7.16	7.09
30	7.56	7.41	7.31	7.22
31	7.59	7.50	7.41	7.34

Dates of sale.	Prices and months of delivery.			
	Aug.-Sept.	Sept.-Oct.	Oct.-Nov.	Nov.-Dec.
1896.				
Aug. 1	Holiday.			
3	Holiday.			
4	Holiday.			
5	7.91	7.81	7.75	7.72
6	8.16	8.03	7.97	7.94
7	8.47	8.34	8.31	8.25
8	8.38	8.25	8.19	8.16
10	8.12	8.00	7.94	7.88
11	8.53	8.41	8.31	8.28
12	8.31	8.19	8.12	8.09
13	8.12	7.97	7.91	7.88
14	8.47	8.31	8.25	8.22
15	8.41	8.22	8.19	8.16
17	8.53	8.38	8.31	8.28
18	8.81	8.66	8.56	8.53
19	8.88	8.69	8.62	8.59
20	8.78	8.59	8.53	8.47
21	9.19	9.00	8.94	8.88
22	9.16	8.97	8.91	8.84
24	8.81	8.59	8.53	8.50
25	8.78	8.59	8.53	8.47
26	8.69	8.50	8.44	8.41
27	8.50	8.31	8.25	8.22
28	8.47	8.28	8.22	8.16
29	8.44	8.28	8.22	8.19
31	8.25	8.06	8.03	8.00

Dates of sale.	Prices and months of delivery.			
	Sept.-Oct.	Oct.-Nov.	Nov.-Dec.	Dec.-Jan.
1896.				
Sept. 1	8.47	8.44	8.41	8.41
2	8.81	8.75	8.72	8.72
3	8.91	8.84	8.81	8.78
4	8.97	8.88	8.84	8.84
5	8.91	8.81	8.75	8.75
7	9.06	8.97	8.94	8.94
8	9.28	9.22	9.16	9.12
9	9.16	9.09	9.03	9.03
10	9.16	9.09	9.03	9.03
11	9.06	8.97	8.91	8.91
12	8.84	8.75	8.69	8.69
14	8.88	8.78	8.72	8.72
15	8.88	8.78	8.75	8.75
16	8.97	8.91	8.84	8.84
17	8.97	8.88	8.81	8.81
18	8.84	8.75	8.69	8.66
19	8.97	8.88	8.81	8.78
21	9.06	8.97	8.88	8.88
22	9.00	8.91	8.84	8.84
23	9.00	8.91	8.81	8.81
24	8.94	8.81	8.75	8.75
25	8.91	8.81	8.72	8.72
26	8.94	8.84	8.78	8.75
28	9.06	8.97	8.91	8.88
29	9.09	9.00	8.94	8.91
30	9.00	8.91	8.81	8.78

Daily closing prices of cotton "futures" in Liverpool—Continued.

Dates of sale.	Prices and months of delivery.			
	Oct.-Nov.	Nov.-Dec.	Dec.-Jan.	Jan.-Feb,
1896.				
Oct. 1	8.81	8.75	8.72	8.69
2	8.91	8.81	8.78	8.78
3	8.81	8.75	8.72	8.69
5	8.78	8.69	8.62	8.62
6	8.78	8.56	8.53	8.50
7	8.62	8.53	8.47	8.44
8	8.56	8.50	8.44	8.41
9	8.41	8.34	8.28	8.28
10	8.41	8.31	8.28	8.28
12	8.47	8.38	8.34	8.34
13	8.56	8.50	8.44	8.41
14	8.47	8.38	8.34	8.31
15	8.41	8.31	8.28	8.25
16	8.41	8.31	8.25	8.25
17	8.38	8.28	8.22	8.22
19	8.47	8.41	8.38	8.34
20	8.47	8.38	8.34	8.34
21	8.44	8.34	8.31	8.31
22	8.41	8.31	8.28	8.25
23	8.53	8.41	8.38	8.38
24	8.62	8.50	8.47	8.47
26	8.56	8.47	8.44	8.41
27	8.50	8.38	8.44	8.44
28	8.66	8.50	8.47	8.44
29	8.66	8.53	8.50	8.47
30	8.59	8.47	8.41	8.41
31	8.69	8.56	8.50	8.47

Dates of sale.	Prices and months of delivery.			
	Nov.-Dec.	Dec.-Jan.	Jan.-Feb.	Feb.-Mar.
1896.				
Nov. 2	8.50	8.53	8.50	8.50
3	8.69	8.66	8.62	8.62
4	8.75	8.72	8.69	8.69
5	8.69	8.66	8.62	8.62
6	8.62	8.56	8.56	8.56
7	8.59	8.53	8.50	8.50
9	8.75	8.72	8.69	8.69
10	8.84	8.78	8.75	8.75
11	8.69	8.62	8.59	8.59
12	8.75	8.66	8.62	8.59
13	8.78	8.72	8.66	8.62
14	8.66	8.59	8.53	8.50
16	8.53	8.47	8.41	8.41
17	8.53	8.44	8.41	8.38
18	8.56	8.50	8.44	8.41
19	8.41	8.34	8.28	8.28
20	8.41	8.31	8.28	8.28
21	8.38	8.31	8.28	8.25
23	8.34	8.28	8.25	8.22
24	8.31	8.25	8.22	8.19
25	8.47	8.41	8.38	8.34
26	8.38	8.28	8.28	8.25
27	8.47	8.41	8.41	8.38
28	8.44	8.41	8.38	8.38
30	8.38	8.34	8.31	8.31

Dates of sale.	Prices and months of delivery.			
	Dec.-Jan.	Jan.-Feb.	Feb.-Mar.	Mar.-Apr.
1896.				
Dec. 1	8.44	8.41	8.41	8.41
2	8.38	8.31	8.31	8.34
3	8.41	8.38	8.38	8.38
4	8.28	8.25	8.25	8.25
5	8.28	8.25	8.22	8.22
7	8.25	8.22	8.22	8.22
8	8.22	8.19	8.19	8.19
9	8.09	8.09	8.09	8.09
10	8.09	8.09	8.09	8.09
11	7.94	7.94	7.94	7.94
12	8.00	7.97	7.97	8.00
14	7.75	7.75	7.75	7.75
15	7.81	7.81	7.81	7.81
16	7.75	7.75	7.75	7.75
17	7.78	7.78	7.78	7.78
18	7.91	7.88	7.88	7.91
19	7.78	7.78	7.78	7.78
21	7.72	7.72	7.72	7.72
22	7.75	7.75	7.75	7.75
23	7.84	7.81	7.81	7.81
24	7.81	7.78	7.78	7.78
25	Holiday.			
26	Holiday.			
28	7.72	7.69	7.69	7.69
29	7.72	7.72	7.72	7.69
30	7.75	7.72	7.72	7.72
31	7.81	7.78	7.78	7.78

Dates of sale.	Prices and months of delivery.			
	Jan.-Feb.	Feb.-Mar.	Mar.-Apr.	Apr.-May.
1897.				
Jan. 1	Holiday.			
2	Holiday.			
4	7.81	7.81	7.81	7.84
5	7.72	7.72	7.72	7.75
6	7.81	7.81	7.81	7.84
7	7.78	7.78	7.78	7.78
8	7.88	7.88	7.88	7.88
9	8.00	8.00	8.00	8.00
11	7.88	7.88	7.88	7.91
12	7.88	7.81	7.84	7.88
13	7.91	7.88	7.88	7.88
14	7.81	7.81	7.81	7.84
15	7.84	7.84	7.84	7.88
16	7.78	7.78	7.78	7.81
18	7.72	7.72	7.72	7.72
19	7.81	7.81	7.78	7.81
20	7.84	7.84	7.84	7.84
21	7.94	7.91	7.91	7.94
22	7.91	7.91	7.91	7.94
23	7.84	7.81	7.84	7.88
25	7.81	7.81	7.81	7.81
26	7.84	7.84	7.84	7.88
27	7.88	7.88	7.88	7.91
28	7.84	7.84	7.84	7.88
29	7.78	7.78	7.81	7.84
30	7.75	7.75	7.78	7.81

Dates of sale.	Prices and months of delivery.			
	Feb.-Mar.	Mar.-Apr.	Apr.-May.	May-June.
1897.				
Feb. 1	7.81	7.81	7.84	7.88
2	7.75	7.78	7.81	7.84
3	7.75	7.78	7.81	7.84
4	7.78	7.81	7.81	7.88
5	7.78	7.81	7.84	7.88
6	7.81	7.81	7.84	7.88
8	7.66	7.66	7.69	7.72
9	7.62	7.66	7.69	7.72
10	7.59	7.62	7.66	7.69
11	7.56	7.56	7.59	7.62
12	.....	.....	.....	.....
13	7.41	7.44	7.47	7.50
15	7.53	7.53	7.56	7.59
16	7.62	7.62	7.66	7.66
17	7.66	7.66	7.69	7.72
18	7.62	7.62	7.66	7.66
19	7.69	7.69	7.69	7.69
20	7.72	7.72	7.72	7.72
22	7.69	7.69	7.69	7.72
23	7.75	7.75	7.75	7.75
24	7.72	7.72	7.75	7.75
25	7.78	7.78	7.78	7.81
26	7.88	7.88	7.91	7.91
27	7.94	7.94	7.97	7.97

Dates of sale.	Prices and months of delivery.			
	Mar.-Apr.	Apr.-May.	May-June.	June-July.
1897.				
Mar. 1	7.91	7.91	7.94	7.94
2	7.84	7.84	7.88	7.88
3	7.81	7.84	7.84	7.81
4	7.75	7.75	7.75	7.78
5	7.66	7.66	7.69	7.69
6	7.72	7.72	7.72	7.75
8	7.78	7.78	7.78	7.78
9	7.78	7.78	7.78	7.78
10	7.81	7.81	7.81	7.81
11	7.78	7.78	7.81	7.81
12	7.72	7.72	7.72	7.72
13	7.81	7.81	7.81	7.81
15	7.84	7.84	7.81	7.84
16	7.88	7.88	7.88	7.91
17	7.81	7.81	7.81	7.81
18	7.84	7.84	7.84	7.84
19	7.88	7.88	7.88	7.88
20	7.81	7.84	7.84	7.84
22	7.84	7.84	7.88	7.88
23	7.84	7.84	7.84	7.84
24	7.88	7.88	7.88	7.88
25	7.78	7.78	7.78	7.78
26	7.78	7.78	7.78	7.81
27	7.81	7.84	7.84	7.81
29	7.78	7.78	7.78	7.78
30	7.81	7.81	7.81	7.84
31	7.84	7.84	7.84	7.84

Daily closing prices of cotton "futures" in Liverpool—Continued.

Dates of sale.	Prices and months of delivery.			
	Apr.-May.	May-June.	June-July.	July-Aug.
1897.				
Apr. 1	7.88	7.88	7.88	7.88
2	7.81	7.81	7.81	7.81
3	7.91	7.91	7.91	7.91
5	7.97	7.97	7.97	7.97
6	7.94	7.94	7.94	7.94
7	7.94	7.94	7.94	7.94
8	7.94	7.94	7.91	7.91
9	7.97	7.94	7.94	7.94
10	8.00	8.00	7.97	7.97
12	7.97	7.94	7.94	7.91
13	8.00	7.97	7.97	7.94
14	8.06	8.03	8.03	8.00
15	8.00	8.00	7.97	7.94
16	Holiday.			
17	Holiday.			
19	Holiday.			
20	Holiday.			
21	8.03	8.00	8.00	7.97
22	8.09	8.06	8.06	8.03
23	8.09	8.06	8.06	8.03
24	8.16	8.12	8.09	8.06
26	8.25	8.22	8.19	8.16
27	8.25	8.22	8.19	8.16
28	8.31	8.28	8.25	8.22
29	8.31	8.28	8.28	8.25
30	8.31	8.28	8.25	8.22

Dates of sale.	Prices and months of delivery.			
	May-June.	June-July.	July-Aug.	Aug.-Sept.
1897.				
May 1	8.34	8.34	8.39	8.22
3	8.28	8.25	8.22	8.12
4	8.22	8.19	8.16	8.06
5	8.25	8.22	8.19	8.09
6	8.25	8.22	8.19	8.09
7	8.22	8.19	8.16	8.06
8	8.31	8.28	8.25	8.12
10	8.31	8.28	8.25	8.12
11	8.25	8.22	8.19	8.06
12	8.19	8.16	8.12	8.03
13	8.19	8.16	8.12	8.03
14	8.16	8.12	8.09	8.00
15	8.19	8.16	8.12	7.97
17	8.09	8.06	8.03	7.91
18	8.12	8.09	8.06	7.94
19	8.09	8.06	8.03	7.91
20	8.06	8.03	8.00	7.88
21	8.03	8.00	7.97	7.84
22	8.03	8.00	7.97	7.84
24	7.94	7.91	7.88	7.75
25	8.09	8.03	8.00	7.88
26	8.06	8.03	8.00	7.84
27	8.09	8.06	8.00	7.88
28	8.06	8.00	7.97	7.84
29	8.06	8.03	8.00	7.84
31	8.09	8.06	8.00	7.88

Dates of sale.	Prices and months of delivery.			
	June-July.	July-Aug.	Aug.-Sept.	Sept.-Oct.
1897.				
June 1	8.03	8.00	7.84	7.66
2	8.06	8.03	7.91	7.69
3	8.06	8.03	7.91	7.69
4	8.06	8.03	7.88	7.69
5	Holiday.			
7	Holiday.			
8	8.12	8.09	7.94	7.75
9	8.16	8.09	7.97	7.78
10	8.12	8.09	7.97	7.78
11	8.06	8.03	7.91	7.72
12	8.06	8.03	7.91	7.72
14	8.00	8.00	7.88	7.69
15	8.06	8.03	7.94	7.72
16	8.09	8.06	7.97	7.75
17	8.09	8.09	8.00	7.78
18	8.12	8.09	8.00	7.78
19	......	......	......	......
21	......	......	......	......
22	......	......	......	......
23	......	......	......	......
24	......	......	......	......
25	......	......	......	......
26	8.06	8.06	7.97	7.75
28	8.09	8.06	7.97	7.78
29	8.16	8.12	8.03	7.84
30	8.19	8.16	8.06	7.88

Dates of sale.	Prices and months of delivery.			
	July-Aug.	Aug.-Sept.	Sept.-Oct.	Oct.-Nov.
1897.				
July 1	8.22	8.09	7.91	7.75
2	8.31	8.22	8.03	7.88
3	8.28	8.16	7.97	7.81
5	8.28	8.25	8.00	7.84
6	8.34	8.22	8.03	7.91
7	8.25	8.12	7.94	7.81
8	8.34	8.22	8.06	7.91
9	8.28	8.16	8.00	7.88
10	8.28	8.16	7.97	7.84
12	8.22	8.09	7.91	7.72
13	8.25	8.12	7.91	7.75
14	8.34	8.22	8.03	7.88
15	8.38	8.28	8.06	7.91
16	8.38	8.28	8.09	7.94
17	8.41	8.31	8.12	7.97
19	8.28	8.16	7.97	7.78
20	8.31	8.16	7.94	7.78
21	8.28	8.16	7.94	7.75
22	8.31	8.16	7.94	7.75
23	8.34	8.19	7.97	7.78
24	8.34	8.22	7.97	7.81
26	8.38	8.25	8.03	7.81
27	8.38	8.25	8.03	7.84
28	8.28	8.12	7.94	7.75
29	8.28	8.16	7.94	7.75
30	8.34	8.19	7.97	7.75
31	Holiday.			

Dates of sale.	Prices and months of delivery.			
	Aug.-Sept.	Sept.-Oct.	Oct.-Nov.	Nov.-Dec.
1897.				
Aug. 2	Holiday.			
3	8.28	8.03	7.84	7.78
4	8.22	8.00	7.81	7.75
5	8.25	8.03	7.81	7.75
6	8.31	8.06	7.88	7.81
7	8.31	8.09	7.91	7.81
9	8.28	8.03	7.84	7.75
10	8.22	8.00	7.81	7.72
11	8.19	7.97	7.78	7.66
12	8.12	7.91	7.69	7.62
13	8.06	7.84	7.66	7.59
14	8.03	7.81	7.66	7.56
16	7.88	7.69	7.50	7.41
17	7.81	7.62	7.44	7.38
18	7.81	7.59	7.44	7.34
19	7.88	7.59	7.50	7.41
20	7.78	7.56	7.41	7.31
21	7.81	7.66	7.47	7.38
23	8.00	7.78	7.59	7.53
24	8.16	7.97	7.78	7.69
25	8.03	7.81	7.59	7.53
26	8.09	7.84	7.62	7.53
27	8.12	7.75	7.53	7.44
28	7.97	7.72	7.53	7.41
30	8.00	7.75	7.53	7.44
31	7.94	7.72	7.47	7.38

Dates of sale.	Prices and months of delivery.			
	Sept.-Oct.	Oct.-Nov.	Nov.-Dec.	Dec.-Jan.
1897.				
Sept. 1	7.78	7.53	7.44	7.4
2	7.75	7.50	7.41	7.38
3	7.69	7.47	7.38	7.31
4	7.72	7.50	7.41	7.41
6	7.72	7.50	7.44	7.34
7	7.72	7.50	7.41	7.34
8	7.72	7.50	7.38	7.34
9	7.78	7.50	7.44	7.41
10	7.75	7.53	7.41	7.38
11	7.72	7.50	7.38	7.34
13	7.69	7.47	7.34	7.31
14	7.69	7.50	7.38	7.34
15	7.78	7.56	7.47	7.41
16	7.69	7.47	7.38	7.34
17	7.62	7.44	7.31	7.31
18	7.56	7.38	7.28	7.25
20	7.53	7.34	7.25	7.22
21	7.50	7.28	7.19	7.16
22	7.53	7.31	7.22	7.19
23	7.47	7.25	7.16	7.12
24	7.47	7.25	7.16	7.12
25	7.41	7.16	7.09	7.06
27	7.28	7.03	6.97	6.94
28	7.25	7.06	6.97	6.94
29	7.25	7.03	6.94	6.91
30	7.25	7.03	6.97	6.94

Daily closing prices of cotton "futures" in Liverpool—Continued.

Dates of sale.	Prices and months of delivery.			
	Oct.-Nov.	Nov.-Dec.	Dec.-Jan.	Jan.-Feb.
1897.				
Oct. 1	7.00	6.94	6.91	6.91
2	6.94	6.88	6.88	6.84
4	7.00	6.94	6.94	6.94
5	7.03	7.03	7.03	7.03
6	7.19	7.12	7.09	7.09
7	7.19	7.12	7.09	7.09
8	7.09	7.03	7.00	7.00
9	7.09	7.00	7.00	7.00
11	7.09	7.03	7.03	7.00
12	7.03	6.94	6.91	6.91
13	6.94	6.84	6.81	6.81
14	6.91	6.81	6.78	6.78
15	6.91	6.81	6.78	6.78
16	6.81	6.72	6.72	6.72
18	6.78	6.69	6.69	6.69
19	6.75	6.66	6.66	6.66
20	6.69	6.62	6.59	6.59
21	6.72	6.66	6.62	6.62
22	6.78	6.69	6.69	6.69
23	6.66	6.59	6.59	6.59
25	6.62	6.56	6.56	6.56
26	6.56	6.50	6.50	6.50
27	6.62	6.56	6.56	6.56
28	6.56	6.50	6.47	6.47
29	6.56	6.50	6.47	6.47
30	6.50	6.41	6.41	6.41

Dates of sale.	Prices and months of delivery.			
	Nov.-Dec.	Dec.-Jan.	Jan.-Feb.	Feb.-Mar.
1897.				
Nov. 1	6.41	6.41	6.41	6.41
2	6.41	6.41	6.41	6.41
3	6.34	6.34	6.34	6.34
4	6.31	6.31	6.31	6.34
5	6.28	6.28	6.28	6.31
6	6.34	6.31	6.31	6.34
8	6.25	6.25	6.25	6.28
9	6.22	6.19	6.19	6.22
10	6.22	6.22	6.22	6.25
11	6.28	6.28	6.28	6.31
12	6.31	6.31	6.31	6.38
13	6.22	6.22	6.22	6.22
15	6.25	6.22	6.22	6.25
16	6.28	6.28	6.28	6.28
17	6.31	6.31	6.31	6.34
18	6.28	6.28	6.28	6.28
19	6.34	6.34	6.34	6.34
20	6.28	6.25	6.25	6.28
22	6.31	6.28	6.28	6.31
23	6.31	6.28	6.28	6.31
24	6.34	6.31	6.31	6.31
25	6.28	6.28	6.25	6.28
26	6.28	6.25	6.25	6.28
27	6.31	6.28	6.28	6.31
29	6.31	6.31	6.31	6.31
30	6.31	6.28	6.28	6.28

Dates of sale.	Prices and months of delivery.			
	Dec.-Jan.	Jan.-Feb.	Feb.-Mar.	Mar.-Apr.
1897.				
Dec. 1	6.25	6.25	6.25	6.28
2	6.28	6.28	6.28	6.31
3	6.31	6.31	6.31	6.34
4	6.34	6.34	6.34	6.34
6	6.28	6.28	6.28	6.31
7	6.31	6.31	6.31	6.34
8	6.25	6.25	6.28	6.28
9	6.25	6.25	6.25	6.28
10	6.25	6.25	6.25	6.28
11	6.25	6.25	6.25	6.28
13	6.28	6.28	6.31	6.31
14	6.28	6.28	6.28	6.31
15	6.28	6.28	6.28	6.31
16	6.22	6.22	6.25	6.25
17	6.22	6.22	6.25	6.25
18	6.22	6.22	6.25	6.25
20	6.28	6.28	6.28	6.31
21	6.31	6.31	6.31	6.34
22	6.28	6.28	6.28	6.31
23	6.34	6.34	6.38	6.38
24	6.34	6.34	6.34	6.38
25	Holiday.			
27	Holiday.			
28	6.28	6.28	6.28	6.31
29	6.34	6.31	6.31	6.34
30	6.38	6.34	6.34	6.38
31	6.38	6.34	6.38	6.38

Dates of sale.	Prices and months of delivery.			
	Jan.-Feb.	Feb.-Mar.	Mar.-Apr.	Apr.-May.
1898.				
Jan. 1	Holiday.			
3	Holiday.			
4	6.31	6.31	6.34	6.38
5	6.28	6.31	6.31	6.34
6	6.28	6.31	6.31	6.34
7	6.31	6.31	6.34	6.38
8	6.31	6.31	6.34	6.38
10	6.31	6.31	6.34	6.34
11	6.28	6.28	6.31	6.34
12	6.28	6.28	6.28	6.31
13	6.25	6.25	6.25	6.28
14	6.28	6.28	6.31	6.34
15	6.28	6.28	6.28	6.31
17	6.28	6.28	6.28	6.31
18	6.22	6.22	6.25	6.25
19	6.22	6.22	6.22	6.22
20	6.28	6.28	6.28	6.28
21	6.25	6.25	6.25	6.28
22	6.22	6.22	6.22	6.25
24	6.22	6.22	6.22	6.25
25	6.25	6.25	6.25	6.28
26	6.28	6.28	6.28	6.31
27	6.31	6.31	6.31	6.31
28	6.31	6.31	6.31	6.34
29	6.28	6.28	6.31	6.31
31	6.25	6.25	6.28	6.31

Dates of sale.	Prices and months of delivery.			
	Feb.-Mar.	Mar.-Apr.	Apr.-May.	May-June.
1898.				
Feb. 1	6.28	6.28	6.31	6.34
2	6.28	6.28	6.31	6.31
3	6.28	6.31	6.31	6.34
4	6.31	6.31	6.34	6.38
5	6.34	6.38	6.38	6.41
7	6.47	6.47	6.47	6.50
8	6.47	6.47	6.50	6.50
9	6.47	6.47	6.50	6.53
10	6.66	6.66	6.66	6.72
11	6.59	6.59	6.59	6.62
12	6.66	6.66	6.69	6.69
14	6.62	6.62	6.62	6.66
15	6.56	6.56	6.56	6.56
16	6.56	6.56	6.56	6.59
17	6.56	6.56	6.56	6.56
18	6.59	6.59	6.59	6.59
19	6.59	6.59	6.59	6.59
21	6.53	6.53	6.56	6.56
22	6.66	6.66	6.66	6.66
23	6.69	6.69	6.69	6.69
24	6.69	6.69	6.69	6.69
25	6.72	6.72	6.72	6.72
26	6.78	6.78	6.78	6.78
28	6.75	6.75	6.75	6.78

Dates of sale.	Prices and months of delivery.			
	Mar.-Apr.	Apr.-May.	May-June.	June-July.
1898.				
Mar. 1	6.72	6.72	6.72	6.72
2	6.81	6.81	6.81	6.88
3	6.78	6.78	6.81	6.78
4	6.75	6.75	6.75	6.75
5	6.75	6.75	6.75	6.78
7	6.69	6.69	6.69	6.72
8	6.69	6.69	6.69	6.69
9	6.72	6.72	6.75	6.75
10	6.66	6.69	6.69	6.69
11	6.62	6.62	6.66	6.66
12	6.56	6.56	6.59	6.59
14	6.56	6.56	6.56	6.56
15	6.53	6.56	6.56	6.59
16	6.56	6.59	6.59	6.59
17	6.56	6.56	6.59	6.59
18	6.59	6.59	6.59	6.62
19	6.56	6.56	6.59	6.59
21	6.53	6.53	6.53	6.56
22	6.56	6.56	6.56	6.59
23	6.53	6.53	6.53	6.53
24	6.50	6.50	6.53	6.53
25	6.50	6.50	6.53	6.53
26	6.50	6.50	6.50	6.53
28	6.50	6.53	6.53	6.53
29	6.59	6.59	6.62	6.62
30	6.62	6.62	6.62	6.62
31	6.66	6.66	6.66	6.66

Daily closing prices of cotton "futures" in Liverpool—Continued.

Dates of sale.	Prices and months of delivery.			
	Apr.-May.	May-June.	June-July.	July-Aug.
1898.				
Apr. 1	6.72	6.72	6.72	6.72
2	6.66	6.66	6.66	6.66
4	6.72	6.72	6.72	6.75
5	6.72	6.72	6.72	6.72
6	6.72	6.72	6.75	6.75
7	6.75	6.75	6.75	6.75
8	Holiday.			
9	Holiday.			
11	Holiday.			
12	6.69	6.72	6.72	6.72
13	6.69	6.69	6.72	6.72
14	6.75	6.75	6.75	6.75
15	6.78	6.78	6.78	6.78
16	6.84	6.84	6.84	6.84
18	6.84	6.84	6.84	6.84
19	6.94	6.91	6.91	6.94
20	7.03	7.03	7.03	7.03
21	7.16	7.16	7.19	7.19
22	7.06	7.06	7.06	7.06
23	7.12	7.16	7.16	7.16
25	7.03	7.03	7.06	7.06
26	7.06	7.06	7.06	7.06
27	7.00	7.00	7.03	7.03
28	6.97	6.97	7.00	7.00
29	7.06	7.06	7.06	7.09
30	7.09	7.09	7.12	7.12

Dates of sale.	Prices and months of delivery.			
	May-June.	June-July.	July-Aug.	Aug.-Sept.
1898.				
May 2	7.00	7.03	7.03	7.03
3	6.94	6.94	6.97	6.97
4	6.91	6.91	6.97	6.97
5	6.88	6.91	6.91	6.91
6	6.97	7.00	7.00	7.00
7	7.03	7.03	7.06	7.03
9	7.00	7.03	7.03	7.03
10	7.03	7.03	7.06	7.06
11	6.97	6.97	7.00	7.00
12	7.00	7.03	7.03	7.03
13	6.97	6.97	7.00	7.00
14	7.00	7.00	7.03	7.00
16	6.94	6.94	6.97	6.97
17	6.91	6.94	6.97	6.94
18	6.97	6.97	6.97	6.97
19	7.00	7.03	7.06	7.03
20	7.03	7.03	7.06	7.03
21	7.00	7.00	7.03	7.03
23	7.03	7.03	7.03	7.03
24	7.06	7.06	7.09	7.06
25	7.06	7.03	7.06	7.06
26	7.06	7.06	7.06	7.06
27	7.09	7.09	7.09	7.09
28	Holiday.			
30	Holiday.			
31	7.06	7.06	7.06	7.06

Dates of sale.	Prices and months of delivery.			
	June-July.	July-Aug.	Aug.-Sept.	Sept.-Oct.
1898.				
June 1	7.03	7.03	7.03	7.00
2	7.00	7.00	6.97	6.94
3	7.00	7.00	7.00	6.97
4	7.00	7.00	7.00	6.97
6	7.00	7.00	7.00	6.97
7	7.03	7.03	7.03	7.03
8	7.00	7.00	7.00	6.97
9	7.03	7.03	7.03	7.00
10	7.00	7.00	7.00	6.97
11	7.00	7.00	7.03	6.97
13	7.00	7.03	7.03	6.97
14	6.97	7.00	7.00	6.97
15	6.97	7.00	6.97	6.94
16	6.97	6.97	6.97	6.94
17	6.94	6.97	6.97	6.94
18	6.91	6.91	6.91	6.88
20	6.78	6.81	6.78	6.75
21	6.75	6.75	6.75	6.69
22	6.75	6.75	6.75	6.72
23	6.72	6.72	6.69	6.69
24	6.78	6.78	6.81	6.75
25	6.75	6.75	6.75	6.72
27	6.78	6.78	6.78	6.75
28	6.78	6.78	6.78	6.75
29	6.78	6.78	6.75	6.72
30	6.72	6.72	6.72	6.69

Dates of sale.	Prices and months of delivery.			
	July-Aug.	Aug.-Sept.	Sept.-Oct.	Oct.-Nov.
1898.				
July 1	6.69	6.69	6.62	6.59
2	6.69	6.66	6.62	6.59
4	6.72	6.72	6.69	6.66
5	6.75	6.75	6.69	6.66
6	6.75	6.75	6.69	6.66
7	6.75	6.75	6.72	6.69
8	6.75	6.72	6.69	6.66
9	6.72	6.72	6.69	6.66
11	6.72	6.72	6.69	6.66
12	6.72	6.72	6.69	6.66
13	6.75	6.72	6.69	6.66
14	6.78	6.75	6.72	6.69
15	6.78	6.78	6.75	6.72
16	6.78	6.75	6.72	6.69
18	6.72	6.69	6.62	6.59
19	6.75	6.72	6.69	6.66
20	6.72	6.72	6.66	6.62
21	6.69	6.66	6.62	6.59
22	6.69	6.66	6.62	6.59
23	6.66	6.62	6.59	6.56
25	6.66	6.66	6.59	6.56
26	6.62	6.62	6.56	6.56
27	6.72	6.69	6.66	6.62
28	6.72	6.69	6.66	6.62
29	6.75	6.72	6.69	6.66
30	Holiday.			

Dates of sale.	Prices and months of delivery.			
	Aug.-Sept.	Sept.-Oct.	Oct.-Nov.	Nov.-Dec.
1898.				
Aug. 1	Holiday.			
2	6.69	6.66	6.52	6.59
3	6.72	6.66	6.62	6.62
4	6.72	6.69	6.66	6.62
5	6.72	6.66	6.66	6.62
6	6.72	6.66	6.66	6.62
8	6.75	6.69	6.66	6.66
9	6.75	6.69	6.66	6.62
10	6.78	6.75	6.69	6.66
11	6.72	6.66	6.62	6.59
12	6.69	6.59	6.56	6.53
13	6.62	6.56	6.53	6.50
15	6.59	6.50	6.47	6.44
16	6.53	6.47	6.41	6.38
17	6.47	6.41	6.34	6.34
18	6.44	6.38	6.34	6.31
19	6.44	6.38	6.34	6.31
20	6.38	6.28	6.25	6.25
22	6.38	6.31	6.25	6.25
23	6.44	6.31	6.28	6.28
24	6.34	6.28	6.22	6.22
25	6.41	6.31	6.28	6.25
26	6.41	6.34	6.28	6.28
27	6.44	6.38	6.31	6.31
29	6.41	6.31	6.28	6.25
30	6.38	6.31	6.25	6.25
31	6.38	6.28	6.25	6.22

Dates of sale.	Prices and months of delivery.			
	Sept.-Oct.	Oct.-Nov.	Nov.-Dec.	Dec.-Jan.
1898.				
Sept. 1	6.31	6.25	6.25	6.25
2	6.34	6.31	6.28	6.28
3	6.28	6.22	6.19	6.19
5	6.28	6.22	6.19	6.19
6	6.28	6.25	6.22	6.22
7	6.25	6.22	6.19	6.19
8	6.31	6.25	6.22	6.22
9	6.28	6.22	6.19	6.19
10	6.25	6.22	6.19	6.19
12	6.28	6.25	6.22	6.22
13	6.31	6.25	6.22	6.22
14	6.25	6.19	6.16	6.16
15	6.19	6.12	6.09	6.09
16	6.16	6.12	6.09	6.09
17	6.12	6.06	6.06	6.06
19	6.09	6.06	6.03	6.03
20	6.12	6.06	6.03	6.03
21	6.06	6.00	5.97	5.97
22	6.09	6.03	6.00	6.00
23	6.06	6.00	5.97	5.97
24	6.03	5.97	5.94	5.94
26	6.00	5.94	5.91	5.91
27	5.94	5.91	5.88	5.88
28	6.00	5.97	5.94	5.94
29	6.00	6.00	5.97	5.97
30	5.97	5.94	5.91	5.91

Daily closing prices of cotton "futures" in Liverpool—Continued.

Dates of sale.	Prices and months of delivery.			
	Oct.-Nov.	Nov.-Dec.	Dec.-Jan.	Jan.-Feb.
1898.				
Oct. 1	5.91	5.88	5.88	5.88
3	5.94	5.91	5.91	5.94
4	5.94	5.94	5.94	5.94
5	5.97	5.97	5.97	5.97
6	6.03	6.00	6.00	6.00
7	6.00	5.97	5.97	5.97
8	6.00	5.94	5.94	5.94
10	5.97	5.94	5.94	5.94
11	5.97	5.94	5.94	5.94
12	5.97	5.94	5.94	5.94
13	5.94	5.94	5.94	5.94
14	5.97	5.94	5.94	5.97
15	6.00	5.97	5.97	5.97
17	6.03	6.00	6.00	6.00
18	6.00	6.00	6.00	6.00
19	5.97	5.94	5.94	5.97
20	6.00	5.97	5.97	5.97
21	5.97	5.94	5.94	5.94
22	5.97	5.94	5.94	5.94
24	5.97	5.97	5.97	5.97
25	5.94	5.91	5,91	5.91
26	5.97	5.94	5.94	5.94
27	5.97	5.94	5.94	5.94
28	5.94	5.91	5.91	5.91
29	5.91	5.88	5.88	5.88
31	5.88	5.84	5.84	5.84

Dates of sale.	Prices and months of delivery.			
	Nov.-Dec.	Dec.-Jan.	Jan.-Feb.	Feb.-Mar.
1898.				
Nov. 1	5.78	5.78	5.81	5.84
2	5.81	5.81	5.81	5.84
3	5.78	5.78	5.78	5.81
4	5.78	5.78	5.78	5.81
5	5.78	5.78	5.78	5.81
7	5.81	5.81	5.81	5.81
8	5.88	5.88	5.88	5.91
9	5.84	5.84	5.81	5.84
10	5.88	5.88	5.88	5.91
11	5.81	5.81	5.81	5.81
12	5.84	5.84	5.84	5.84
14	5.88	5.88	5.88	5.88
15	5.88	5.84	5.84	5.88
16	5.84	5.81	5.81	5.84
17	5.88	5.84	5.84	5.88
18	5.91	5.88	5.88	5.91
19	5.94	5.91	5.91	5.94
21	5.91	5.91	5.91	5.91
22	5.97	5.97	5.97	5.97
23	6.03	6.00	6.00	6.03
24	6,06	6.03	6.03	6.03
25	6.03	6.00	6.00	6.03
26	6.06	6.00	6.03	6.03
28	6.19	6.16	6.16	6.16
29	6.12	6.09	6.09	6.12
30	6.12	6.06	6.06	6.09

Dates of sale.	Prices and months of delivery.			
	Dec.-Jan.	Jan.-Feb.	Feb.-Mar.	Mar.-Apr.
1898.				
Dec. 1	6.06	6.06	6.09	6.09
2	6.09	6.09	6.09	6.12
3	6.03	6.03	6.03	6.06
5	6.09	6.09	6.12	6.12
6	6.09	6.09	6.09	6.12
7	6.09	6.09	6.09	6.12
8	6.09	6.09	6.12	6.12
9	6.16	6.16	6.19	6.19
10	6.12	6.12	6.16	6.19
12	6.16	6.19	6.22	6.22
13	6.16	6.16	6.19	6.19
14	6.19	6.19	6.22	6.22
15	6.16	6.19	6.19	6.19
16	6.12	6.12	6.16	6.19
17	6.06	6.09	6.12	6.12
19	6.03	6.06	6.09	6.12
20	6.03	6.06	6.09	6.12
21	6.03	6.03	6.06	6.09
22	6.06	6.06	6.09	6.12
23	6.06	6.06	6.09	6.12
24	Holiday.			
26	Holiday.			
27	6.03	6.03	6.09	6.09
28	6.03	6.06	6.06	6.09
29	6.09	6.09	6.12	6.16
30	6.06	6.06	6.09	6.12
31	Holiday.			

Dates of sale.	Prices and months of delivery.			
	Jan.-Feb.	Feb.-Mar.	Mar.-Apr.	Apr.-May.
1899.				
Jan. 2	Holiday.			
3	6.03	6.06	6.09	6.12
4	6.03	6.06	6.09	6.12
5	6.06	6.09	6.12	6.16
6	6.06	6.09	6.12	6.16
7	6.09	6.12	6.16	6.19
9	6.16	6.22	6.22	6.25
10	6.19	6.22	6.25	6.28
11	6.16	6.19	6.22	6.25
12	6.19	6.19	6.25	6.28
13	6.16	6.19	6.22	6.25
14	6.16	6.19	6.22	6.25
16	6.12	6.12	6.19	6.22
17	6.12	6.16	6.19	6.22
18	6.19	6.19	6.22	6.25
19	6.28	6.28	6.31	6.24
20	6.25	6.25	6.28	6.31
21	6.31	6.28	6.31	6.34
23	6.41	6.41	6.44	6.47
24	6.44	6.44	6.47	6.50
25	6.38	6.38	6.41	6.41
26	6.50	6.50	6.53	6.56
27	6.56	6.56	6.59	6.59
28	6.47	6.47	6.50	6.53
30	6.53	6.53	6.56	6.56
31	6.44	6.44	6.47	6.50

Dates of sale.	Prices and months of delivery.			
	Feb.-Mar.	Mar.-Apr.	Apr.-May.	May-June.
1899.				
Feb. 1	6.44	6.47	6.47	6.53
2	6.47	6.50	6.53	6.56
3	6.38	6.41	6.44	6.47
4	6.41	6.44	6.47	6.50
6	6.41	6.44	6.47	6.50
7	6.53	6.56	6.59	6.59
8	6.50	6.50	6.53	6.56
9	6.53	6.53	6.56	6.59
10	6.59	6.59	6.59	6.62
11	6.62	6.62	6.66	6.69
13	6.72	6.75	6.75	6.78
14	6.72	6.72	6.75	6.75
15	6.75	6.75	6.75	6.78
16	6.72	6.72	6.75	6.78
17	6.62	6.62	6.66	6.66
18	6.69	6.69	6.72	6.75
20	6.62	6.62	6.66	6.69
21	6.56	6.56	6.59	6.62
22	6.62	6.62	6.66	6.66
23	6.59	6.59	6.62	6.66
24	6.59	6.59	6.62	6.62
25	6.53	6.53	6.56	6.59
27	6.66	6.66	6.69	6.72
28	6.66	6.66	6.66	6.69

Dates of sale.	Prices and months of delivery.			
	Mar.-Apr.	Apr.-May.	May-June.	June-July.
1899.				
Mar. 1	6.59	6.62	6.66	6.66
2	6.66	6.66	6.69	6.72
3	6.69	6.69	6.72	6.72
4	6.75	6.75	6.78	6.78
6	6.78	6.78	6.78	6.81
7	6.78	6.78	6.78	6.81
8	6.78	6.78	6.81	6.81
9	6.72	6.72	6.72	6.75
10	6.69	6.69	6.72	6.72
11	6.66	6.66	6.69	6.69
13	6.66	6.66	6.66	6.69
14	6.62	6.62	6.66	6.66
15	6.69	6.69	6.69	6.72
16	6.66	6.66	6.69	6.69
17	6.62	6.62	6.62	6.62
18	6.62	6.62	6.62	6.66
20	6.56	6.56	6.59	6.59
21	6.50	6.50	6.53	6.53
22	6.50	6.50	6.53	6.53
23	6.56	6.56	6.59	6.59
24	6.53	6.53	6.53	6.56
25	6.59	6.59	6.59	6.62
27	6.59	6.59	6.62	6.62
28	6.66	6.66	6.66	6.66
29	6.62	6.62	6.62	6.66
30	6.66	6.66	6.66	6.69
31	Holiday.			

Daily closing prices of cotton "futures" in Liverpool—Continued.

Dates of sale.	Prices and months of delivery.			
	Apr.-May.	May-June.	June-July.	July-Aug.
1899.				
Apr. 1	Holiday.			
3	Holiday.			
4	6.59	6.62	6.59	6.62
5	6.59	6.59	6.59	6.59
6	6.59	6.59	6.59	6.62
7	6.62	6.62	6.66	6.66
8	6.66	6.66	6.69	6.66
10	6.59	6.62	6.62	6.62
11	6.59	6.62	6.62	6.62
12	6.59	6.62	6.62	6.62
13	6.56	6.59	6.59	6.59
14	6.56	6.56	6.56	6.56
15	6.56	6.56	6.59	6.56
17	6.62	6.62	6.62	6.62
18	6.62	6.62	6.62	6.62
19	6.59	6.59	6.59	6.59
20	6.59	6.59	6.62	6.62
21	6.62	6.62	6.62	6.62
22	6.62	6.62	6.66	6.62
24	6.62	6.62	6.62	6.62
25	6.62	6.62	6.62	6.62
26	6.62	6.62	6.66	6.66
27	6.59	6.59	6.62	6.62
28	6.59	6.59	6.62	6.62
29	6.59	6.59	6.59	6.62

Dates of sale.	Prices and months of delivery.			
	May-June.	June-July.	July-Aug.	Aug.-Sept.
1899.				
May 1	6.59	6.59	6.62	6.59
2	6.56	6.59	6.59	6.59
3	6.56	6.59	6.59	6.59
4	6.59	6.59	6.62	6.62
5	6.66	6.66	6.66	6.66
6	6.66	6.69	6.69	6.69
8	6.66	6.66	6.69	6.69
9	6.69	6.69	6.72	6.66
10	6.66	6.66	6.69	6.69
11	6.66	6.69	6.69	6.69
12	6.62	6.66	6.66	6.66
13	6.62	6.66	6.66	6.66
15	6.62	6.62	6.66	6.66
16	6.62	6.62	6.66	6.62
17	6.62	6.66	6.66	6.66
18	6.66	6.66	6.69	6.69
19	6.66	6.66	6.69	6.66
20	Holiday.			
22	Holiday.			
23	6.62	6.62	6.66	6.66
24	6.62	6.66	6.66	6.66
25	6.66	6.66	6.69	6.69
26	Holiday.			
27	Holiday.			
29	6.62	6.62	6.66	6.66
30	6.66	6.66	6.69	6.69
31	6.66	6.69	6.69	6.66

Dates of sale.	Prices and months of delivery.			
	June-July.	July-Aug.	Aug.-Sept.	Sept.-Oct.
1899.				
June 1	6.66	6.69	6.69	6.69
2	6.69	6.69	6.69	6.69
3	Holiday.			
5	6.72	6.72	6.72	6.69
6	6.72	6.72	6.72	6.69
7	6.72	6.75	6.72	6.72
8	6.75	6.75	6.75	6.72
9	6.72	6.72	6.72	6.72
10	6.69	6.69	6.69	6.66
12	6.72	6.72	6.72	6.72
13	6.69	6.69	6.69	6.66
14	6.69	6.69	6.69	6.66
15	6.72	6.72	6.69	6.69
16	6.72	6.72	6.69	6.69
17	6.69	6.69	6.69	6.66
19	6.69	6.69	6.69	6.66
20	6.66	6.66	6.66	6.62
21	6.59	6.59	6.59	6.56
22	6.53	6.53	6.50	6.50
23	6.53	6.53	6.53	6.50
24	6.50	6.50	6.50	6.47
26	6.47	6.47	6.50	6.44
27	6.50	6.50	6.47	6.44
28	6.50	6.47	6.47	6.44
29	6.47	6.44	6.44	6.41
30	6,47	6.47	6.47	6.44

Dates of sale.	Prices and months of delivery.			
	July-Aug.	Aug.-Sept.	Sept.-Oct.	Oct.-Nov.
1899.				
July 1	6.50	6.50	6.47	6.44
3	6.56	6.56	6.53	6.50
4	6.53	6.53	6.50	6.47
5	6.56	6.53	6.50	6.47
6	6.53	6.53	6.50	6.47
7	6.53	6.53	6.50	6.47
8	6.59	6.59	6.56	6.53
10	6.56	6.56	6.53	6.50
11	6.56	6.53	6.50	6.47
12	6.50	6.47	6.44	6.41
13	6.53	6.50	6.47	6.44
14	6.50	6.47	6.47	6.44
15	6.50	6.47	6.44	6.41
17	6.53	6.50	6.47	6.47
18	6.53	6.50	6.47	6.44
19	6.59	6.56	6.53	6.50
20	6.62	6.59	6.56	6.53
21	6.56	6.53	6.50	6.47
22	6.59	6.56	6.53	6.50
24	6.56	6.53	6.50	6.47
25	6.56	6.53	6.50	6.47
26	6.59	6.56	6.53	6.47
27	6.59	6.56	6.53	6.50
28	6.56	6.53	6.50	6.47
29	6.62	6.59	6.53	6.50
31	6.59	6.56	6.53	6.50

Dates of sale.	Prices and months of delivery.			
	Aug.-Sept.	Sept.-Oct.	Oct.-Nov.	Nov.-Dec.
1899.				
Aug. 1	6.56	6.53	6.50	6.47
2	6.53	6.50	6.47	6.44
3	6.59	6.53	6.50	6.47
4	6.59	6.56	6.53	6.50
5	Holiday.			
7	Holiday.			
8	6.66	6.62	6.59	6.56
9	6.72	6.69	6.66	6.62
10	6.75	6.72	6.69	6.66
11	6.97	6.91	6.88	6.81
12	7.03	6.97	6.94	6.91
14	6.91	6.88	6.84	6.78
15	6.81	6.78	6.75	6.69
16	6.69	6.66	6.59	6.56
17	6.62	6.56	6.53	6.50
18	6.66	6.62	6.56	6.53
19	6.66	6.59	6.56	6.53
21	6.81	6.75	6.72	6.69
22	6.97	6.91	6.88	6.84
23	6.91	6.88	6.84	6.81
24	6.91	6.84	6.81	6.78
25	6.91	6.84	6.81	6.75
26	6.97	6.91	6.84	6.84
28	6.91	6.84	6.81	6.78
29	6.91	6.84	6.81	6.78
30	6.88	6.78	6.75	6.72
31	6.75	6.69	6.62	6.59

Dates of sale.	Prices and months of delivery.			
	Sept.-Oct.	Oct.-Nov.	Nov.-Dec.	Dec.-Jan.
1899.				
Sept. 1	6.75	6.69	6.66	6.66
2	6.75	6.69	6.66	6.66
4	6.72	6.66	6.62	6.62
5	6.78	6.72	6.69	6.72
6	6.81	6.75	6.72	6.72
7	6.91	6.84	6.81	6.81
8	6.91	6.84	6.81	6.81
9	6.81	6.78	6.75	6.72
11	6.84	6.81	6.78	6.75
12	6.81	6.75	6.72	6.72
13	6.81	6.78	6.72	6.72
14	6.88	6.81	6.78	6.75
15	6.84	6.81	6.75	6.75
16	6.84	6.78	6.75	6.72
18	6.84	6.81	6.78	6.75
19	6.91	6.84	6.81	6.78
20	7.00	6.97	6.91	6.91
21	7.06	7.03	7.00	6.97
22	7.16	7.12	7.06	7.03
23	7.06	7.03	7.00	6.97
25	7.31	7.25	7.22	7.28
26	7.31	7.28	7.25	7.25
27	7.44	7.41	7.38	7.34
28	7.59	7.53	7.50	7.47
29	7.53	7.50	7.44	7.41
30	7.56	7.53	7.50	7.47

Daily closing prices of cotton "futures" in Liverpool—Continued.

Dates of sale.	Prices and months of delivery.				Dates of sale.	Prices and months of delivery.				Dates of sale.	Prices and months of delivery.			
	Oct.-Nov.	Nov.-Dec.	Dec.-Jan.	Jan.-Feb.		Nov.-Dec.	Dec.-Jan.	Jan.-Feb.	Feb.-Mar.		Dec.-Jan.	Jan.-Feb.	Feb.-Mar.	Mar.-Apr.
1899.					1899.					1899.				
Oct. 2	7.75	7.69	7.66	7.66	Nov. 1	7.78	7.75	7.72	7.72	Dec. 1	8.31	8.28	8.25	8.22
3	7.66	7.59	7.56	7.56	2	7.78	7.78	7.75	7.72	2	8.44	8.38	8.34	8.31
4	7.66	7.66	7.59	7.59	3	7.88	7.84	7.81	7.81	4	8.25	8.22	8.16	8.12
5	7.84	7.81	7.78	7.78	4	7.91	7.88	7.84	7.84	5	8.28	8.25	8.19	8.16
6	7.75	7.72	7.69	7.69	6	8.00	7.97	7.94	7.91	6	8.16	8.12	8.06	8.03
7	7.56	7.53	7.50	7.50	7	8.16	8.09	8.09	8.09	7	8.28	8.22	8.19	8.12
9	7.81	7.78	7.75	7.75	8	8.19	8.12	8.12	8.12	8	8.25	8.22	8.16	8.12
10	7.72	7.69	7.66	7.66	9	8.25	8.19	8.16	8.16	9	8.22	8.16	8.12	8.06
11	7.59	7.56	7.53	7.50	10	8.00	7.97	7.94	7.94	11	8.25	8.22	8.16	8.09
12	7.62	7.59	7.56	7.56	11	7.91	7.88	7.84	7.81	12	8.25	8.19	8.12	8.09
13	7.56	7.56	7.50	7.50	13	7.91	7.88	7.84	7.84	13	8.31	8.25	8.19	8.16
14	7.69	7.66	7.62	7.62	14	7.91	7.84	7.81	7.81	14	8.31	8.25	8.19	8.16
16	7.62	7.59	7.56	7.53	15	8.00	7.97	7.94	7.91	15	8.38	8.31	8.28	8.22
17	7.59	7.56	7.56	7.53	16	7.88	7.84	7.81	7.78	16	8.31	8.25	8.22	8.16
18	7.72	7.69	7.66	7.66	17	7.91	7.88	7.84	7.84	18	8.19	8.12	8.06	8.03
19	7.81	7.78	7.75	7.75	18	8.09	8.03	8.00	7.97	19	8.16	8.09	8.03	8.00
20	7.72	7.72	7.69	7.66	20	8.06	8.03	7.97	7.97	20	8.28	8.22	8.16	8.09
21	7.75	7.72	7.72	7.72	21	8.03	7.97	7.94	7.91	21	8.19	8.12	8.06	8.00
23	7.78	7.78	7.75	7.72	22	7.97	7.94	7.91	7.88	22	8.25	8.19	8.12	8.06
24	7.69	7.69	7.66	7.62	23	8.06	8.03	8.00	7.97	23	Holiday.			
25	7.72	7.69	7.66	7.62	24	8.22	8.16	8.12	8.09	25	Holiday.			
26	7.72	7.69	7.69	7.66	25	8.19	8.12	8.09	8.06	26	Holiday.			
27	7.72	7.69	7.66	7.62	27	8.25	8.19	8.16	8.12	27	8.41	8.34	8.25	8.22
28	7.78	7.75	7.72	7.69	28	8.34	8.28	8.25	8.22	28	8.47	8.41	8.34	8.28
30	7.81	7.81	7.78	7.75	29	8.25	8.19	8.12	8.09	29	8.66	8.56	8.47	8.41
31	7.75	7.72	7.72	7.69	30	8.34	8.28	8.22	8.19	30	Holiday.			

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